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THE MARYLAND FARMER:

DEVOTED TO

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DRAINAGE.

Some time ago a discussion occurred in France in regard to the influence that an increase of population exerts in checking the spread of malarious fevers.—We presume that this discussion was in some measure elicited by Edmond About's graphic and interesting work concerning that singular district in France which is known as "The Landes." In the work alluded to, and intermingled with a charming love tale, About has given facts and figures to prove that the marshes and sanded district in which the scene of his story is laid, though at present almost a barren and unsightly waste, could be brought under profitable cultivation and made to support a large population. This book, the production of a remarkable able writer, has excited much comment not only in France, but in other countries. Attention being thus drawn to the subject, other writers have taken up the matter, and among them two eminent medical men—M. Tripiér and M. Tournon—both of whom contend that in districts containing but few inhabitants an increase of population has been attended by a decrease of fevers and other diseases having their origin in a marshy soil. The reason assigned is that the greater the population and the closer the dwellings and farms are to each other the more complete becomes the drainage. As the drainage becomes more general, the excess of moisture in the soil is carried off and the fruitful cause of malarious diseases is gradually but surely abated until it ceases altogether. It is a received axiom that the drier a soil is the most conducive it is to the general health. In England, where the climate is moist from the frequency of rains, men never build on a close, compact soil if it be possible to avoid it, but rather choose such as have a gravelly subsoil through which the excess of water can percolate, and so desirable is this considered that those building lots in the neighborhood of large cities fetch by far the highest prices where the subsoil is gravel and the drainage is most perfect.

In regard to villages situated in unhealthy loca-

tions M. Tournon lays down the following propositions:

1st. "That miasm gives way in the place of an agglomeration of buildings, and that the closer the buildings are together the less the inhabitants feel the effects of miasmatic influences. From this he concludes that the centre of a town or village presents the maximum of security."

2d. "Whenever a village begins to be depopulated, no matter from what cause, the malaria first attacks its outer parts, advances as the houses are emptied and laying seige as it were to the remaining inhabitants attacks them finally in the centre, when they are too much diminished in numbers to repel the germs of the disease by congregation."

The assumption is that where a large number of people are clustered together the drainage of the spot by their several exertions becomes more or less perfect, and they are thus measurably secured from the evils of malaria. But in extensive districts of country where swamp lands abound, it would be manifestly impossible to drain them by individual effort, for the population there must necessarily be thin so long as the district is known to be malarious. It is only in districts known to be healthy that a dense population is to be found, so that in counties covered with great swamps drainage must precede population. It may be different in the suburbs of cities, because the land becomes valuable in proportion to its proximity to a market, and the cost of drainage will generally be found to be more than repaid by the increased value of the land which is thus laid dry. In North Carolina, where immense bodies of swamp land ceded to the State by the Federal Government are now offered for sale, drainage has in some instances performed wonders in promoting the health of the locality and in increasing the fertility. But only wealthy private capitalists or incorporated companies with an adequate capital can afford to incur the immense outlay necessary to reclaim such lands. Whenever the pressure of population forces men to encroach upon the swamp lands and reclaim them little by little, a change will be wrought in

many districts now lying waste. But so long as it is cheaper generally to renovate naturally good but worn out soils than to reclaim virgin soils in which moisture superabounds, private enterprise will prefer to labor on the former rather than on the latter. All work of this kind upon an extensive scale has hitherto been undertaken in Europe, where the population is dense and land dear, by the aid of government subsidies, or else at the sole cost of the government. The drainage of Harlem Lake, in Holland, the most wonderful enterprise of this character yet accomplished, is an instance of the manner in which a government can step in most wisely to promote the welfare of its people. By a gigantic system of drainage, and a liberal use of mechanical appliances, seventy square miles of the richest soil in the world were redeemed. Bedford Level, formerly a marshy tract occupying thousands of acres, is now by thorough drainage one of the finest wheat growing counties in England. At this time a private company in this country is attempting a work of a similar kind which promises to be equally successful.

The title of this company is "The New York Iron Dike and Land Reclamation Company." The great difficulty experienced heretofore in the construction of dikes where the land to be reclaimed lay along the course of great rivers, or was subject to tidal overflow, was the want of some impenetrable defence against all those animals that bore into earthen embankments, and thus by their minute and dangerous labors offer a passage through which the water at once penetrates until it enlarges the aperture, and finally breaks down the dike and submerges the reclaimed land. That difficulty in the instance of the Company now engaged in reclaiming the Newark meadows, bordered by Hackensack and Passaic rivers, is said to be overcome by the use of a thin, continuous plate of iron as the core of the dike. On each side of this core the embankment is raised, of a strength sufficient to resist the pressure of the water. Of course no such precautions would be necessary in our ordinary swamp lands, which would only require drains of a capacity sufficient to carry off the water on and above soil, and an outlet sufficiently depressed to allow of the water being carried off. How far State aid, to be reimbursed when such lands were sold, might be invoked in their reclamation we leave to the future decision of our legislators.

A WASH FOR FRUIT TREES.—*The Massachusetts Plowman* gives us this:

"Take a pint of crude petroleum and a gallon and a half of soft soap. Mix intimately and let the mixture stand till the whole is intimately blended, and then dissolve in twenty gallons of water. It is perfectly safe on trees, and it will extirpate all kinds of insects that infest them where it comes in contact with them."

A FEW SIMPLE DIRECTIONS IN LANDSCAPE GARDENING.

At this season of the year, when those who live in the country have leisure to study the improvement or ornamentation of their homesteads, a few practical suggestions in regard to the best method of planting out trees and shrubs for the decoration of the larger or smaller plot of ground surrounding the dwelling may not be thought inopportune. It is sometimes made a matter of reproach to us that our farm-houses and country homes as a general thing are so carelessly constructed and present about them so little of embellishment. Who does not know what a grace and beauty are given to the humblest of rural dwellings by draping them with vines and running roses? A sheltered porch; a few flowers well selected and of varieties that come into bloom in succession, from early spring throughout the summer, add beauty to any lawn or grass plot, and harmonizing as they do with the verdure of the grass, add a new glory to a common scene. On these matters, however, we do not at this time propose to dwell.—What we desire to do for the purpose of meeting what we apprehend to be a general want is to offer a few brief practical suggestions in regard to the best mode of laying out the grounds about the homestead, whether those grounds embrace but half an acre or are of larger area. The first consideration, whether in laying out the grounds about a house newly constructed, or in improving those in the midst of which the dwelling has long been established, is to take into consideration the position of the house in regard to its access, both to the public road and to the farm steading. It may be if the house stands within its own enclosure, and the barn and stables have a separate approach, the road to the latter will of course be left out of the question. But in many instances it is desirable that both these roads should be laid off within the grounds. In such a case their location is the first thing to be considered. In a new place the taste and judgment of the proprietor has ample scope for development. In an old one he must adapt whatever changes he makes so as not to interfere with the trees already growing there. With shrubbery he may proceed if it be necessary more boldly, for the greater part of the shrubs can be safely removed and transplanted if they stand in the way of the proposed changes. Let any one now, as preliminary to what he proposes to do, take a sheet of plain writing or drawing paper and on it mark with a pencil first of all the situation of the dwelling; next, the course of the public road; and finally, the position occupied by the barn and out-buildings. With this rude skeleton map before him, premising that the relative distances of each of the points indicated are well preserved, he can next

proceed to indicate by dotted lines the approaches to the house, the barn and the outbuildings. When these roads are laid down, the paths, both in front and rear, should be traced in a similar manner, taking care not to interfere with any valuable trees, or any important shrubbery that may be already growing within the limits of the grounds. Thus far then we assume that the ground work for the proposed improvement has been thoughtfully sketched out. It would be well now to take a new survey of the grounds with the skeleton map in hand, so as to ascertain that no modifications of the rude outlines are required. When this is satisfactorily settled the next thing to do is to indicate by dots the places where deciduous trees and shrubs, either singly or in groups, are to be planted. The starting point should be the house, where the heaviest groups and masses of trees and shrubs should be placed, the densest mass being so situated as to afford protection to the dwelling from the northwest winds. Having thus located the groups and masses at the rear and sides of the house, and so disposed as not to intercept the finest views from the windows, the position of the minor groups and masses are next to be studied out, each dot in a group or mass representing a tree or shrub, and all the groups or masses should be disposed irregularly, as we find them in nature, and each should be connected with the other by small groups and single trees. When shrubs are used, and they should be employed almost exclusively in small places, the larger groups and masses should be about the dwelling, interspersed with a few deciduous trees, and thinning off gradually along the line of approach from the public road. In all cases the finest effects in our climate are produced by evergreens, of which the shrubbery should be largely composed. Their dark green leaves in summer contrast well with the lighter and fresher foliage of deciduous trees and shrubs, and in the case of flowering shrubs bring out the beauty of the blossoms more vividly. With the working drawing thus made it is an easy matter to stake off the roads and walks, and the position of all the groups, masses and single trees and shrubs that are to be planted. The staking off, however, requires care. Where there are curves in the line of approach to the house, or a circle or pear-shaped ellipse in front of it, a line should be used in conjunction with the stakes, so as to preserve accuracy. The stakes employed may be sawed laths, white-washed and pointed, and not a road should be cut or a tree or shrub set until the entire plan is indicated by these stakes, for it is quite possible that many changes of the stakes will be required before the eye is satisfied that the arrangements are perfect. Nor should the improver be content with examining his ground plan as staked out from one or two points of view only. He should particularly observe and

calculate in his mind the effect from different windows of the house, and from the various turns in the road and walks, and should be careful above all to consider what the general result will be, not so much when the trees are planted, but when they are grown of a goodly size. The great error that nearly all unprofessional improvers commit is in planting too closely. They do not reflect upon the extent to which trees and shrubs expand their branches, and therefore do not allow of distance enough between the individual trees and shrubs that are planted to form groups and masses, and they often also plant so close to the carriage way that in the course of a few years the branches of the trees have to be lopped, whereby the proper balance of the head is apt to be lost. One other remark may be made here in connection with the last suggestion. In planting deciduous trees and evergreens together the planter should take especial care that they do not interfere with each other. Generally speaking deciduous trees grow more rapidly than evergreens, and in the course of a few years, if planted too close, they crowd them, and thus deprive them of their characteristic form of growth. In such a case one or the other has to be sacrificed, and every improver knows the pain it costs him to cut down a tree whose growth he has watched for years.

ACTIVE MANURING.—One of the most active manures and readily within the reach of most farmers, is a mixture of leached ashes, plaster, and night soil mixed with fine soil. Let them be thoroughly worked over on a smooth spot, and allowed to stand a week before using, working it over every other day, and you have a most valuable manure at a trifling cost of time. A handful of this mixture is excellent to give corn a start. Potatoes and garden vegetables generally feel it very quick. Hen manure is an excellent ingredient in such manures, but it should be well slaked with water before mixing with other substance. In this climate we have quite often a cold week or two the first of June, when corn and tender garden vegetables suffer severely. We know of no better way to keep up the courage of plants at this trying season than by the use of such manures.—*Maine Farmer.*

MANURES.—In the management of manures, care should be taken to prevent too great a heat by composting and forking over. Loam and muck if mixed freely under the stables will preserve the heap, prevent fire-fanging and thus prove very useful. It is a good plan to lay in a store of these substances to be mixed occasionally with the manure heap through the winter.—*Mass. Ploughman.*

Josh Billings says he don't care how much a man talks, if he will only say it in a few words.

Our Agricultural Calendar.

Farm Work for December.

We have now entered fairly upon that season of the year in which out-of-door farming operations are almost entirely suspended. The cutting of fire wood, the threshing or marketing of grain, the care of fences and gates, some draining work, the fattening of hogs, the feeding and protection of farm stock, the getting out of fence stuff—these now constitute the chief labors of the farmer. But apart from these there are domestic matters in which the comfort of the household during inclement weather requires to be considered. In frame houses, such as are usually built in the country, but too little regard is paid to the preservation of coolness in summer, and of warmth in winter, but of this subject we propose to treat at large hereafter. We therefore merely state here that no pains should be spared to promote in every possible way that sense of cosiness which is too often sacrificed where houses are imperfectly constructed, and the requisite means have not been taken to cure them of their defects. All parts of a country house in bitter winter weather should be so arranged and so protected as to preserve an even temperature throughout.—But we pass this matter at present to turn to another. Every intelligent farmer should have a library, for when genial society is not always to be had, or where the neighborhood is sparsely settled, nothing adds so much to enjoyment during the long winter evenings as good books and the information, instruction or amusement they impart.—With these brief remarks we turn to the work to be done:

WINTER PLOWING.

Of late years the severity of our winters has precluded the possibility of breaking up clay lands after November so as to let them lay fallow until the spring for the purpose of exposing them to the action of frost. If, however, there should be, as sometimes happens to be the case, a couple of weeks, or even less, of open weather the opportunity should be taken advantage of whenever there are soils of a stiff and adhesive texture that require to be benefited by the disintegrating action of frost.—We have often remarked that land in which sand predominates should not be winter ploughed; but that clay land, except when they are wet, will be greatly ameliorated by a winter fallow.

FATTENING SWINE.

The first consideration with those who desire to fatten hogs economically is to provide them with pens well protected from the south and southwest winds, comfortable sleeping apartments. To give

hogs corn in the ear is wasteful. Two-thirds the quantity of coarsely ground meal diluted with water and kitchen slops, and suffered to remain until it sours will be found to go farther than one-third more of corn, whether given on the cob or shelled. A writer of experience states that cabbage leaves sullied and let stand for a month and then mixed with buttermilk will fatten a hog in three weeks. We, however, should think that the process of fattening would be much more certain if the slops were mixed with meal. The best method of feeding is to feed little and often, so as to prevent waste.—The following mode has been highly recommended: For the first month feed with boiled potatoes and pumpkins mashed together and mixed after the preparation has had time to cool, with a sprinkling of corn meal, oats or peas. From two to four weeks before killing feed only with dry corn and clear cold water. To prevent acidity, keep charcoal and rotten wood with a mixture of salt and ashes in the pen, to which the hogs can have ready access.—The great secret in fattening hogs quickly is to provide them with warm quarters and to feed them with fat farming food frequently, and little at a time.

HARVESTING CORN.

If the corn has been shocked up and has not yet been gathered in, harvest it as quickly as possible. Crows make sad depredation in the winter season on outstanding corn.

MILCH COWS.

See that these are warmly housed and fed liberally, alternating roots and slops with dry food. They should not, however, be kept up all the time, but should be let out in good weather for a few hours, and should have free and regular access to pure water. Salt them twice a week.

COLTS AND YOUNG CATTLE.

Rough and careless feeding on coarse provender has often stunted some of the most promising young animals. In their growing state they require generous but not lavish feeding, and adequate protection from the weather. With warm stabling or sheds, occasional exercise and a supply of good, wholesome, nutritious food they will amply repay the extra care that is taken of them.

FIREWOOD.

Coal has come so much into fashion in districts within easy distance of large cities, that very little wood is now burned in comparison to what was once used, and wherever a railroad penetrates and the expense of transportation is not too great, or where farms are accessible to water carriage, coals are more economical in many instances than the use of wood drawn from the farm. But in large sections of country these advantages are not to be had, and

in such places a full supply of firewood has to be cut to meet the wants of the household throughout the ensuing year. After suffering it to dry for a month or two, haul it home whilst the ground is frozen and cord it up under shelter, where it can remain until it is properly seasoned.

FENCING.

Bad fencing makes bad neighbors, and breachy cattle. We have known more ill blood arise from these causes than any other, and usually the feud is more lasting. No man likes another's stock tramping over his fields, and in his anger at the intrusion is often not over nice in his language. Provision should therefore be taken against contingencies of the sort by getting out a sufficient quantity of fencing stuff. Although worm fences are more expeditiously made they are always unsightly, and post rail will be found much the cheapest in the long run.—The rails and posts on being split should be hauled home and pointed, hewed, and morticed under shelter.

DRAINING AND DITCHING.

In wet meadows overgrown with bushes often the best time for cutting a main drain is when the ground is frozen a few inches. All the numerous roots that traverse the soil can then be readily cut with an old axe and when once the frosted crust is removed along the line where the ditch is to run the remainder of the work is comparatively easy.

Carts, Wagons, Tools and Implements.

Examine these and if any repairs are needed have them made, so that they may be ready for use whenever they are required.

MATERIALS FOR MANURES.

The winter season, if there should happen not to be snow on the ground, offers an excellent opportunity for collecting all sorts of rough fibre for conversion into manure. They may be either composted according to the directions so frequently given; or they may be spread over the barn-yard to act as absorbents and to be heaped up to ferment as soon as the spring opens.

TRANSPLANTING TREES.—A correspondent in Ohio asks us whether he can transplant trees in the winter months, when he usually has more leisure than at any other season of the year. Certainly he can.—There is nothing to hinder except the frost. Trees set out in unfrozen ground in December, January and February will, if carefully done, be about as sure to grow as in November or March. As to evergreens, which he farther inquires about, there is no difficulty as to their growing if properly transplanted. Our own loss has been less with them than any other tree. They should however be firmly staked to keep them in their places during the high winds of March and April.—*Germantown Telegraph.*

Garden Work for December.

There is nothing to be done of special importance in the open garden during this month. But where hot beds are made many vegetables may continue to be grown under frames. The work to be done is as follows:

Lettuce and Small Salading.—The seed of lettuce, cress and rape may be sown in hot beds for early use. Care should be taken to give the plants air during mild sunny weather, and to protect them with mats whenever the weather is cold and inclement. Water the bed occasionally with tepid water.

Cabbages.—Those cabbages which have matured their heads should have been taken up and stored away last month. If this duty has been delayed, see that it is performed as early as possible.

Heavy Clay Soils.—Dry these up if the season permits, and leave the soil rough and exposed throughout the winter to the action of the weather. It will prove of great additional advantage to the soil if it is manured heavily before spading.

Asparagus Beds.—Clean off the beds. Fork the soil well over, taking care not to disturb the tender roots. Top-dress heavily with manure, and give the whole bed a liberal dressing of refuse salt.

Cleaning off.—Gather up all the refuse in the garden—the vines, weeds, stalks and tufts of grass—and either haul the materials into the barn-yard, or collect them in a heap and burn them. Put carefully away for future use the pea sticks and bean poles, and cut and trim fresh ones if more are needed. If there are any stones remaining in the garden have them picked off and carted away. The beds designed for early spring planting should be heavily manured with rich-well-rotted manure and spaded up, leaving the soil rather rough, if the texture is heavy. Such a soil as the last mentioned would be also greatly benefited by carting freely on to it a number of loads of woods' earth and sand.

SECURE THE LEAVES.—The woods are now full of leaves. Indeed they appear to be more abundant than ever, but farmers do not value them as highly as we think they should. For barnyards especially they are profitable to haul in. They are obtainable too when there is little pressing work on hand.—Gathered up in heaps they can be readily loaded in carts and wagons with close shelvings by using either a cloth some two or three yards square, or with a wooden rake and the arm. Hogs are very fond of them for litter, so are cows; and for compost they are excellent. As oats straw is now usually fed to cattle and rye straw commands a high price in the market, there is nothing left for the purpose of littering except wheat straw. Hence forest leaves should be held in higher estimation than they commonly are.—*Germantown Telegraph.*

GREEN MANURING AND MANURES.

BY JOHN F. WOLFINGER, MILTON, PA.

Benefits Derivable from Green Manuring.

The benefits or advantages derivable from green manuring ploughed down into the soil are numerous as well as great. I will mention the most prominent benefits only.

1. It restores to the soil all of those mineral and saline elements that its growth or growing plants had absorbed or drawn from the soil, to wit, alumina, lime, magnesia, potash, soda, sulphur, oxide of iron, oxide of magnesia, &c., for growing plants absorb or suck up from the soil, through the spongioles or numerous little mouths of their roots, these and all other substances that are essential or useful to their growth, and retain them in their stems and and leaves.

2. It also restores to the soil all of these fertilizing gases that its growing plants had absorbed or derived from the air or atmosphere, to wit, oxygen, hydrogen, nitrogen, carbonic acid, chlorine, &c. It is now an ascertained fact that the spongioles, pores, or little mouths on the *under sides* of the leaves of all growing plants have the power of absorbing or sucking in from the surrounding air all the above, and perhaps other as yet unknown gases that are essential or useful to their own healthy and vigorous growth. We thus, in ploughing down *the whole* of a green manurial crop, not only restore to the soil all that its growing crop had received from the soil, but, at the same time, also all, or nearly all, that it had received from the air. And so we must, of necessity, make the soil better or richer than it was before, since we really add to it more, a good deal more, fertilizing matter than the ploughed-down vegetation had taken from it.—Hence, if we, in the language of Johnston, “repeat the process with a *second* crop, it (the soil) becomes richer still, and it would be difficult to define the limit beyond which the process could no further be carried.”—And, as he remarks, “those soils only are beyond the reach of this process on which plants refuse to grow at all, or on which they grow so languidly as to extract no more from the air than is restored to it again by the natural decay of the organic matter which the soils already contain.”—But no soils are so poor that nothing at all will grow on them. If we select the plants and grass-seed best suited to their weak and low condition and sow and manure them, as best we can, with a little animal manure, we may gradually, though it be slowly, so improve those poor and barren grounds that they will at last produce a sufficient amount of vegetable matter to make them, when it is ploughed down, increase pretty rapidly in point

of fertility, and then we shall be rewarded for all our labors in nursing them into usefulness. When we have once got them into a productive condition we must, as time progresses, also impart to them such animal and mineral manures as the farm crops grown on them demand, if we desire to prevent their relapsing again into their original poor and unproductive state.

3. Green manuring ferments and decays very rapidly (especially if its mass be heavy and dense) in consequence of its soft and sappy nature, and thus produces an immediately beneficial effect upon the very first crop of grain, grass, and the like, grown upon it, or its decaying roots, stems, and leaves.

4. It makes the stems of wheat, rye, oats and other cereal plants grow up stronger and stiffer, and bear larger and heavier kernels or grains, than animal manures can produce. It has a similar beneficial effect upon our different root, grass, and other fodder crops.

5. It makes the soil loose and mellow, because the vegetable matter so ploughed down becomes, through the future action of the plough, harrow, and cultivator, so intermixed with the hard particles of earth as to render them softer, and gradually crumble down under the influence of the air and solar heat, into a darker-colored and porous loamy soil. I have seen a field, whose heavy, stiff, cold, and adhesive clay ground here has, through the action of *green manuring* vigorously practiced upon it for several years, undergone this very change to such an extent that it surprises its owner, as well as others. The reason or philosophy of this change is easily understood from what I have already said.

6. It makes the soil warmer, because its fermenting vegetable matter acquires and evolves a *large amount of heat* while undergoing the process of fermentation and decay. That heat, will of course, render the soil everywhere considerably warmer than it otherwise would have been, and so fits many a cold soil for producing a good corn, or other farm crop, that it would, without such manuring, have been *too cold* to produce. But to secure this warmth of soil one must grow and plough down a *heavy and dense mass* of vegetable matter, as such a mass only is capable of producing a large amount of heat. If we collect a thick and compact heap of weeds of any kind, say a wheelbarrow full of purslane and such other weeds as grow up spontaneously in our gardens and out lots, and let them lie in a mass for two or three days, we shall then be astonished to find what a heat its interior parts contain—a heat resembling, at times, a bake-oven heat. This will show us, at once, what must go on under ground when a dense mass of vegetable matter is ploughed into the soil as a manure. The ploughing down of

a thin and scanty green manurial crop, however, will produce and evolve but little heat, and be of little use so far as the warming up of the soil is concerned.

7. Its fermenting and putrefying vegetable matter either destroys or drives away insects, bugs, and worms, and so saves from their destructive ravages the various farm crops grown upon such green manured soils. The green manurings are supposed to kill or expel these insects, bugs, and worms, partly through the heat evolved by their fermentation, and partly, and perhaps mainly, through the repulsive nature of their hot, sharp, bitter, pungent and acrid juices contained in green vegetation.—Animal manures are, on the contrary, very favorable to the production and presence of the various worms, bugs and insects that injure and destroy our various farm crops. And hence vegetable manures are, in this point of view, far safer and better than animal manures are.

8. A dense crop of green and growing vegetation enriches the land on which it grows merely by its covering and shading the ground. Anderson, a Scotch agricultural writer, says :

“Every practical farmer knows, or ought to know, for the facts are constantly before his observation, that land can be made exceedingly fertile without manure. He must have noticed that if any portion of the soil has been covered, either accidentally or designedly, for some time, by water, stone, plank, logs, chips, brush, rails, cornstalks, straw, buildings of every description, with cellars, hay or straw ricks, leaves, or clover, and, in fact, that under any and every substance which has covered its surface closely, it (the surface soil) invariably becomes exceedingly fertile and that the degrees of this fertility is totally independent of the covering substance.”

This is true, and it becomes so because this fibrous covering prevents the evaporation of its moisture, and, by confining the air there, favors the accumulation of carbonic acid, nitrogen, chlorine, and other fertilizing gases of the air, which putrefy the vegetable matter in and upon the soil, and so enrich the soil and render it porous and mellow.

Now, these eight benefits or advantages derivable from green manuring are certainly sufficient to recommend the practice of such manuring to every farmer who has a proper regard for his own interests. But we have two other reasons of a peculiar nature, and connected with the practice of such manuring, that ought to make green manuring very popular among farmers of every class throughout our widespread Union. These reasons are as follows: 1. Because such green manuring can be grown upon the whole farm, field after field, and right upon the spot or spots where it is needed, and so will save all the time, labor, and expense of hauling manures for this purpose; and, 2. Because crop after crop of such green vegetable manures can be grown and ploughed down on such grounds as are too poor to yield a crop of grain on roots, until these grounds, however poor, will be able to pro-

duce good farm crops. The most barren soils imaginable have been and can be improved and made quite productive in this way, as thousands upon thousands of acres of land in Europe have shown; and what has been done there can also be done here, as the same causes produce the same effects everywhere throughout the world.

(To be continued.)

ON DRAINING---No. 2.

DEPTH OF DRAINS AND DISTANCE APART.

“When doctors differ, who are able to decide?” There is scarcely any subject connected with agriculture that has excited so much controversy as the proper depth of drains and the distance they should be placed apart. There is not, nor can there be, any definite rule applicable to all soils, under all circumstances. The question is yet an open one, as to what is the best depth of drains and the distance apart, to remove economically and effectually both bottom and surface water. I hope some of your correspondents, who are able to bring both head and heart fitted for the work, will take up the subject and discuss it both mechanically and chemically.

In porous or open soils, the deeper the drain the further it will draw; therefore, the drains may be placed farther apart. In clay, or a white dead compact sand, the draining, when no porous stratum can be reached, is governed by the shrinkage or cracking, which is greater in some soils than in others, and likewise in some seasons than in others. The drains do not require to be so deep in those soils as in the former, but closer together.

Early in the present century, Mr. Smith, the pioneer of thorough drainage, advocated his system from two to two and a half feet deep. Hear what he says:—“In laying off the drains, the first object for consideration is the nature of the subsoil; if it consists of a strong, stiff till, or a dead sandy clay, then the distance from drain to drain should not exceed from ten to fifteen feet; if a lighter and more porous subsoil, a distance of from eighteen to twenty-four feet will be close enough: and in very open subsoils, forty feet distance.” Before his death, he allowed a deeper drain—from two and a half to three and a half feet deep.

In later years, Mr. Parks, who represents the deep and distant drain system, says:—“It consists with my own practice, at the present time, that drains are being executed at depths from four to six feet, according to soil and out-fall, and at distances varying from twenty-four to sixty-six feet: complete efficiency being the end studied, and the proof of such efficiency being that, after a due period given for bringing about drainage action in soils

unused to it, the water should not stand higher, or much higher, in a hole dug in the middle between a pair of drains, than the level of those drains."

Mr. Merton, who is considered good authority, says the one extreme of Mr. Smith, viz: ten feet, is a waste of money, and the other extreme of Mr. Parks,—sixty-six feet—unsafe for thorough drainage. He has given a scale of depth from three to four feet, and distance varying from eighteen to forty feet, according to soil.

I have adopted a scale by which a great deal of land, similar to a part of mine, has been drained, viz: loam on clay subsoil, from three to three and a half feet deep—distance thirty feet; while the other part, a more open subsoil, may do at forty feet distance. From the above it will appear, that from three to four feet is a proper depth for agricultural purposes, with distance from twenty to forty feet. Some of our horticultural neighbors may call for a greater depth, for their business.

Modern agriculture teaches us, that to have large crops we must have a deep dry soil; in all our improvements, efficiency, combined with economy, should be our aim,

And to our faults, not very blind;
But to our soil a little kind.

Your young beginner may ask how surface water can get into two inch-pipe, buried from three to four feet in clay. In my next I will tell him how it can get in, and likewise kept in until it reaches the place of outfall.

JOHN BRODIE.

THE HOP PLANT.

BY LEWIS BOLLMAN, OF DEPARTMENT OF AGRICULTURE.
[ABRIDGED]

The cultivation of the hop has rapidly advanced in the United States. The use of malt liquor has increased, not only on account of the large access of German population, but because of the growing taste for it among Americans. The high taxes on alcoholic liquors will induce a greater use of malt liquors. There will, therefore, be an increasing demand for hops.

The entire crop of this product in the United States has been as follows: In 1840, 1,238,502 pounds; 1850, 3,497,020 pounds; 1860, 11,010,012 pounds; and, as estimated, in 1862, 16,000,000 pounds.

SOIL AND MANURE.

The soil and manure best adapted to the growth of the hop may be determined by analysis, and the general character of the growth of the plant. The roots of the hop penetrate deeply and widely, and are liable to suffer from drought. In a climate of extremes, like ours, this drought must be guarded against, and this can best be done by having a large portion of vegetable matter in the soil, which is a

non-conductor of heat, and attracts and retains moisture. It should be broken up deeply, and always kept thoroughly pulverized. It should be deep, that the lower roots may sustain the moisture of the plant in drought; and it should be well pulverized, for in such a condition of the soil air cannot dry it deeply, because it does not crack and admit large amounts of heat, and the subsoil moisture rises higher between fine particles of loose soil. This plant is a great exhauster, both by reason of the thorough summer cultivation demanded, and by what it abstracts from the soil. Analysis shows this; and the following is an English analysis of the hop:

ANALYSIS OF THE HOP.		OF WHEAT AND WHEAT STRAW.		Composition of the Ashes.	
Hops.	Leaves	Bine.	Wheat.		Straw.
9.00	21.94	7.28	.....	.....
19.16	22.35	9.99	1.27	65.38	
0.74	3.12	2.63	.....	.....
8.96	2.29	15.33	.....	.....
.....	
31.70	13.13	17.60	9.05	0.16	
9.69	30.78	23.91	23.72	13.44	
4.80	4.84	3.77	2.81	6.70	
.....	.....	.....	13.03	3.82
0.68	0.19	0.80	.....	.....
5.10	1.89	0.24	.....	.....
17.33	9.33	11.69	0.24	5.82	
.....	.....	49.81	3.07	.....
1.92	12.04	11.92	.....	.....
.....	
99.98	99.96	99.99	.....	.....
Total.....				.....

In this table the analysis of wheat is given also as a comparison, because it is conceded that good wheat lands may be made good hop lands. Silica in larger quantities is taken from the soil by the hop when the straw of both crops is returned to it.—Both have nearly the same amount of potash and soda; but the hop has much more lime and sulphuric acid, and much less magnesia and phosphoric acid. The aggregate pounds per acre do not differ materially in these crops, estimating the number of pounds of hops at 900 per acre, and of wheat at 15 bushels, equal to 900 pounds.

The chief difference is in silica, lime, and sulphuric acid. Hence it follows that gypsum, or plaster

of Paris, would be a beneficial manure for hop grounds, because it is sulphate of lime. It is composed of lime 32.56, sulphuric acid 46.51, water 20.93. Its best mode of application would be on clover after it has commenced its spring growth, for in this way it would add much to the vegetable matter of the soil, as well as to its lime and sulphur. The crop of clover should of course be turned under.

The English regard lime as of much importance, and Mr. Manwaring recommends a mixture of barn-yard manure, muck, and "a good quantity of lime." If the soil requires manuring and deepening, this should first be done by the gypsum-dressed clover turned under to the depth of ten inches. When broken up to plant the hop roots, it should be subsoiled an additional depth of eight inches. Trenching with the spade is a useless waste of labor where the plough can be used, and hops should not be planted where it cannot; for, as the hop demands a loose, deep soil, it would soon, except in certain localities, be washed away on hill-sides.

Barn-yard manure should always be applied during the cultivation of the crop, and even before if the soil is not rich. In Great Britain alluvial soils are regarded as excellent; and clay soils, especially, if tenacious, should be thoroughly drained, for a plant so deeply rooted as the hop should not have its lower roots imbedded in standing water.

The character of the soil best suited to the hop may be inferred from what is said of it as found best in Great Britain: "The hop," says Mr. Manwaring, "delights in the richest lands; a deep mould and light; if mixed with sand, the better; a black garden mould being excellent for it. Hops cannot be cultivated to advantage, except on strong rich land of considerable depth of soil, which must be constantly manured, or otherwise little benefit is to be expected." The climate of England is a moist one in comparison with that of the United States, and not subject to our extremes of heat and drought. Our soils, then, should be deeper, with less of barn-yard manure, and more of vegetable matter, which has a two-fold action. Vegetable matter acts not only as a manure, but also as a non-conductor of heat, and shields the subsoil moisture from evaporation by our hot burning suns.

THE LOCATION AND MANAGEMENT OF THE HOP GROUNDS.

In speaking of *mould*, the necessity of having the grounds well exposed to drying and airy winds was shown. It should also be exposed to the sun. Hence, low, damp situations should be avoided. If the ground is inclined to be heavy, as our clays generally are, especially if it is a yellowish clay, and not a red, then the grounds should be well drained. The red clays are usually drier, having less alumina and more small gravel. If the grounds lie towards

the bottom of a slope, it would be well to guard them by a deep ditch, so that neither the heavy rains on the slope, nor its drainings under the top soil, could be carried into the hop grounds. The situation should also be free from heavy winds, and especially guarded against those strong-blowing winds which attend the storms of hot weather.—They mostly blow from the west, and hence a south-eastern slope, with corresponding high lands, should be selected. But no protection of this kind must be regarded, at the expense of thorough ventilation of the grounds.

The general management of the hop-grounds should have in view the sustaining of their fertility. The table of the analysis of the leaves and bines shows the large amount of silica, chloride of potassium, potash, lime, phosphoric and carbonic acids in them. These, then, should be returned to the soil, and this can most advantageously be done by ploughing them under. This ploughing in should be done in the fall, with some composts added.—And these composts should be varied from year to year. "In practice," says Mr. Morton, in his *Cyclopædia of Agriculture*, "the best informed hop-growers have found it desirable to obtain a mixture of manures in the soil, which is most readily accomplished by varying the form of manuring every year." Our own experience corroborates this view, and we would recommend its continuance till more accurate knowledge on the subject is attained; for by this practice the deficient ingredients of one year's dressing will probably be compensated by the superabundance of the next.

Belonging to the general management of the grounds is the question of removing the earth immediately around the roots of the vines, and substituting other soils. In Great Britain, under proper cultivation, the hop will produce good crops for twenty years. "No rule," says Mr. Morton, "can be given for the length of time during which hops can be successfully grown upon the same soil. This must be ascertained by actual experience; but we may state, generally, that hops grow best on a new soil, all other circumstances being equal, &c. Ordinary land should be changed once in ten or twenty years. The durability of the hop plant is very great, when growing upon congenial soil, with careful cultivation. It is difficult to ascertain the age of particular plantations; we have one, however, in our possession, which has not been replanted for at least 150 years, and it is as flourishing as ever."—He also mentions one that had been in uninterrupted cultivation for fully 300 years.

These statements show the longevity of the hop plant. How far plants leave in the soil an excrementitious matter unfavorable to their own growth,

is a question not at all settled, but many facts indicate that some of them do to a great extent. That the health and vigor of the hop plant would be increased by an occasional change of the soil in immediate contact with its roots, is certain, from the high cultivation it demands, and the active and powerful manures it needs to overcome the attacks of its enemies and diseases. Portions of this soil might, then, be advantageously changed, and this could be done by running as deep a furrow with the plough, and as near to the roots as possible, and hauling rich soils or composts to fill it up, or taking the soil from the middle of the alleys and shovelling it into these furrows, thus rotating, as it were, the soil from the hills to the middle of the alleys.

(To be continued.)

CASTOR OIL BEAN IN CALIFORNIA.

The *San Francisco Bulletin* says: The experiments made last year in cultivating castor beans in this State may be set down on the whole as successful. And yet the success was not so as to warrant any very heavy ventures in this direction.

The bean plant grows luxuriantly and the yield is very great, surpassing in those instances which came under our observation that of any other oil seed save the sun flower. But there is no way of gathering the crops known to our people, which dispenses with a large amount of hand labor. The seeds do not ripen simultaneously, but a few only at a time, ranging over a period of several weeks. If the seeds are not gathered as soon as ripe the balls snap, the beans are scattered over the ground, and in that condition are hardly worth the cost of gathering. When labor can be had cheap, as for instance that of children or Chinamen, no doubt the crop can be raised at a large profit.

The beans will even plant themselves and grow with very little attention, often monopolizing the grounds to the exclusion of weeds. But the trouble is they cannot gather themselves, or ripen so that a clean job can be done by any agricultural machine yet invented. There is likely to grow up here a large demand for the castor bean, and no doubt the difficulties we have noticed will be finally overcome. The making of castor oil will soon come to be a special business, and we may say that much more skill is required in the manufacture of merchantable castor oil, than is required in the production of any other of the vegetable oils. With a powerful press the grinding process may be wholly dispensed with; but the bleaching and clarifying process requires considerable skill and some knowledge of chemistry.

"Young man, do you believe in a future state?"

"In course I duz: and what's more, I intend to enter it as soon as Betsy gets her things ready."

ICE-HOUSE FOR FARMERS.

Farmers are beginning to find that an ice-house is of some importance, especially to those who have large dairies and cellars that are inclined to be warm through the summer season. The expense of constructing a very good ice-house is but trifling. It should be located on a rising gravelly or sandy piece of land, or at least where there is good drainage, and a gradual descent. Descending towards the north would be best. An ice-house for dairying purposes need not exceed ten by twelve feet; dig the pit from 8 to 10 inches larger than you intend the frame. Let the pit be from eight to ten feet deep. For your frame take four posts from six to seven inches square, put on one or two joists on each side and a sill on the top, with a few braces, leaving the joists so short that there may be room sufficient to plank up the sides. Hemlock plank will do as well as any, even slabs will do very well. If you are short of lumber, after the frame is up, put one plank or two slabs round on the outside at the bottom of the posts; then having a quantity of tan or sawdust, push it down firmly between the planking and the sills of the pit. Thus proceed until you come to the top of your frame. Let no soil or earth touch the wood in any place. Then place the feet of the rafters on the sill, forming a steep roof, which should be double-boarded and well-shingled. The ends likewise must be double-boarded and made tight with a good door to shut close and snug at one of the ends. Let the earth be raised round the house to carry off the water. At the bottom of the cellar you may place some old timbers for sleepers, covering them with refuse plank or slabs, as a sort of floor, on which put straw or shavings.

At the proper season have your ice secured, the thicker the better; saw it into large square pieces, of the size you may fancy; pack the ice as compactly as possible, after which let all the remaining space above be filled with straw or shavings pressed down. The latter is said to be preferable in respect to durability. When ice is wanted for use be careful to place the covering over it as before, admitting as little air as possible.

We hope farmers will take a little interest in this matter, and have an ice-house of their own. It will be a luxury in the warm days of haying to have a little ice-water to quench thirst, preserve meat, fish, butter, milk, &c., both for use and market.—J. L. HERSEY, in *Germantown Telegraph*.

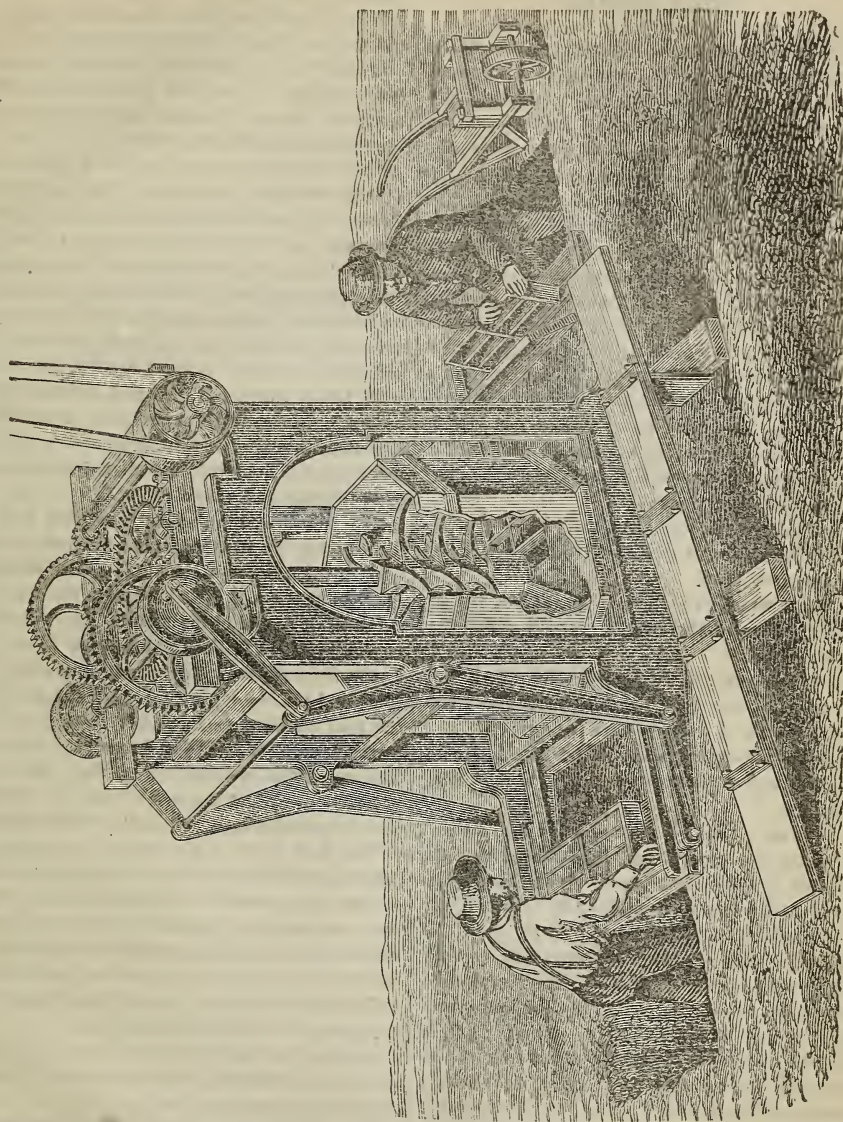
"Our idea is," says a fellow who had got a shrew for a wife, that—

"Woman's love is like Scotch snuff,
We get one pinch, and that's enough."

An old darkey says:

"Woman's love is India rubber,
It stretch de more de more you lubber."

FRANCIS H. SMITH'S NEW BRICK MACHINE.



This may be considered the latest improvement in the art of Brick making, being the result of many years practical operation by the inventor with his former machine, patented in 1854, on which many improvements have been made, some within the present year—all the subject of another patent. He now deems it susceptible of no more, and is remarkable for its simplicity, cheapness and efficiency.

The clay is taken direct from the bank; passed through a pulverizer, which frees it of stone—water is then thrown upon it, where it lays some hours in soak, and then to the machine where it is molded so

stiff that the brick may be lifted as soon as dropped.

For further particulars see advertisement.

A GOOD CORN STIMULANT.—Two bushels of ashes to one of plaster. Apply between planting and hoeing a small handful to the hill. If the application be soon followed by a gentle rain, the benefit will be more marked than if a drouth ensue. Some say, that by an application of the above mixture the value of their crop has been increased by one half. On some soils, no doubt, this difference would occur. —*Ex.*

POTATO CULTURE.

ANALYSIS has shown that the potato plant requires a large amount of potash, in order to a vigorous, healthy growth. It also requires lime, soda, chlorine, carbon, and sulphuric acid. All these exist in a soil in which the various farm crops have been grown in rotation, with frequent manuring. On such land, therefore, a fair crop may reasonably be expected, without manuring specially for this crop. Or if a moderate application of barn manure be made directly to the potato crop, when planted on an improverished soil, not manured for previous crops, a fair production may reasonably be expected; since barn manure, if properly preserved, (not washed by water from the eaves of the barn or from a side hill above the yard, till its potash and other soluble matters have gone down stream,) is always reliable. But the growing of potatoes by the aid of barn manure, does not seem to me to be good policy for the following reasons:

1st. I believe the barn manure gives a speedier and a richer return, if applied to corn, grass, or almost any other crop.

2d. Barn manure conduces to the potato disease, and is therefore unsafe in those years in which that disease prevails.

3d. The mineral fertilizers are safer; and if applied only to the extent required, cost very little, compared with the value of barn manure.

I am ready therefore, to recommend the following as a substitute for a barn manure, in the growing of potatoes.

For one acre, take 8 bushels of wood ash, 6 bushels of quick lime (oyster-shell lime should have the preference, if it can be obtained), 4 bushels of plaster, and 2 bushels of salt—making 20 bushels in all; mix thoroughly together, and apply in the hill, at a rate which will carry the 20 bushels over an acre.

The above supplies the essential ingredients for a large growth of potatoes, and something more, provided the soil be not excessively meagre; and if there be an excess of these ingredients over the requirements for the present crop, it will be very sure to remain in the soil for the benefit of future crops. Especially will it be so, if the succeeding crops be potatoes, and if the tops be left each year to rot on the ground, so that the potash they contain (this being the most important ingredient in the mixture,) may go to the benefit of the succeeding crop. I will here say, that from actual experiment I have learned that although rotation in crops is undoubtedly beneficial, generally, the potato may be made an exception, if treated to the foregoing compost.

If any farmer chooses to grow his family store of potatoes on the same patch, or his thousands of bushels for market, in the same field, there can be

no objection, provided he will each year leave the tops scattered about pretty evenly over the ground, and will make thorough work with weeds.

Less of the compost will suffice for the second year than for the first; still less for the third; and so on till 10 or 12 bushels will produce as satisfactory results as 20 did at first.

I once grew potatoes in just this way, enough for a family averaging upwards of thirty, on a patch of three-quarters of an acre, for seven or eight years in succession, or I would not recommend it to others. The land was of a brownish loam, not a strong soil naturally, and it had previously been exhausted by long cropping without manure. It was a soil which never had produced potatoes of the first quality, but rather of a second or third quality, as compared with those grown on soil well supplied with the proper ingredients for the potato—potash, lime, etc. Nor had that kind of land produced large crops, unless heavily manured, and then, in almost every case, the crop had rotted badly.

The first year, I ploughed something like eight inches deep, planted across the furrows, putting a little of the mixture in the hills—not more, certainly, than at the rate of 20 bushels to the acre (and I think less), dropping the seed in the mixture, and covering shallow. Not thinking how heating such a mixture must be, I did wrong by covering shallow: and the wrong became apparent by a few of the seed *burning up*, instead of *coming up*,—as a severe drought of twelve or fifteen days followed.—The crop was however, better than was at first promised, giving at the rate of just 100 bushels to the acre, mostly large and of the very best quality.

The next year, the compost or mixture was thrown into the hills in such a way as to scatter it rather thinly over a considerable space; the seed was covered four or five inches deep. All came up well, and the crop was splendid during its growth—producing a profusion of blossoms and balls, and yielding, in autumn, a larger crop than the previous year, equally good in quality.

During the remaining years, in which I treated this patch in the same way as the second year, the results were equally satisfactory.

I then left the place, and my successor has since told me, that for four or five years he planted potatoes on the same ground, without applying any sort of manure whatever, and that he never had harvested better crops, either in quantity or quality.—The high price of tobacco then induced him to change the potato crop for that.

Other experience than my own has strengthened my belief in the suitableness of the foregoing mixture to the potato crop. In short, I have no remaining doubt of its excellence. It seems to meet the wants of the potato. It may not prove itself an

effectual remedy against the potato disease,—I do not propose it as such,—and yet I have seen it so invigorating the plant, giving its tops a stocky, upright direction, covered with blossoms and pendant clusters of balls, instead of a slender, trailing form, with few or no blossoms or balls—that it measurably, at least, strengthens the growing crop against disease. One thing is certain,—during the twelve years, or more, while the above described practice was being carried out, no disease affected the crop in the least, while on similar soils in the same neighborhood, potatoes were rotting badly.

If potatoes were to be cultivated in this way, on cold, sour soils, it would be advisable to omit the plaster, because it is of no use on such land; but, at the same time, it might be well to increase the lime—that being a sweetener of sour soils.

After the experience I have had, and the observations I have made, I can think of but one objection to the growing of potatoes long in this way on the same field, and that is, its tendency to become weedy. But that objection, I think, can be obviated by a peculiar, but not expensive nor a difficult mode of cultivation, which I will undertake to describe at some future time.—*Morris' Practical Far.*

A Cheap Stump Puller.

The *Country Gentleman* gives the following description of a cheap stump puller, invented by Mr. H. M. Rogers, of Kenosha, Wisconsin:

"I bought two screw jacks, and I had a stout log chain. These jacks have one and one-half feet lift, working in cast-iron pedestals. I procured a stout beam, eight feet long, and about as heavy as two men would want to carry, and two pieces of plank for the jacks to stand on, together with some blocks, &c., and all was ready. I place the beam across the largest and stoutest root of the stump, one jack on each side, and as near the stump as I think the roots will allow, and resting on a piece of plank. The chain is passed around the root and the beam. One man at each jack will raise almost any stump to the full lift of the screw, which, in a majority of cases, is sufficient; if not, place a stud under each end of the beam; let down the jacks, and placing blocks under them, give the stump another lift. Two men will pull from thirty to fifty stumps a day, and the machine will cost fifteen or twenty dollars, while the jacks are useful for many purposes besides pulling stumps, and would be salable at any time.—There is no patent on this puller."

The *Rural New Yorker* speaks well of the Diehl wheat. It has seen some heads with over eighty kernels in each. Two New York farmers last year harvested 300 bushels from ten acres, and this year's crop was more promising.

SOUTHERN CLOVER.

The *Aiken Press* gives from the pen of its editor an account of a new plant, the *Lespedeza Striata* or Japan clover, which has recently been mysteriously disseminated through the middle country of Georgia and South Carolina, which we think bids fair to play a very important part in the renovation of our worn out lands. It is ascertained to be a native of China and Japan, and by what means it has found a habitation among us has not yet been ascertained. From the description given of this plant in the *Aiken Press*, from the pen of its learned and talented editor, we feel assured it is a plant which will be of inestimable benefit to the South. Hitherto we have found nothing to put upon an equality, in agricultural matters, with those portions of the country where clover flourishes and thrives. We have had heretofore no green crop to maintain the fertility of the soil. If, however, we are not mistaken in our hopes, the *Lespedeza Striata* will enable us year by year to uniform our soil, and to increase the number of the stock which we can afford to keep.

The great problem in agriculture, upon which every other agricultural question depends, is how to feed a large number of cattle successfully and economically. All improvement of the soil depends upon the successful solution of this problem. At the North, the successful cultivation of clover has ensured to farmers advantages to which we have been unable to attain. If the *Lespedeza Striata* is all that has been claimed for it as a forage crop, the valley of Virginia will have no advantage over the poor soil of Clarendon.

We can maintain the fertility of our soil, rejoice in rich butter, and improve our exhausted lands to such a degree that their culture will again be profitable. As the *Lespedeza Striata* is a perennial-rooted plant, we need but manure it once, and leave this new plant to take possession of the soil, and its mass of foliage and its draught upon the gases of the atmosphere accomplish wonders. It roots out the sterile broomsedge, furnishes an abundant green pasture to cattle and is capable of being converted into the best of hay.

It has not yet—so far as we have heard—made its appearance in our District. It is found, we are told flourishing in Orangeburg and St. Stephen's parish, separated from us by the Santee.

Believing from the descriptions that have reached us, that it will prove an incalculable benefit to the South, we will be thankful to any friend who will send us a few seed for a trial of its merits.

It is a heavy tax to purchase guanos and superphosphates every year, and a plant which will maintain the fertility of the soil, as we believe the *Lespedeza Striata* will do, will be of incalculable benefit to the South.—*Clarendon (S. C.) Press*

USE OF BURNED AND UNBURNED BONES.

Among practical men there still seems to be a diversity of opinion as to the value of burned or boiled bones when compared with unburned ones. This diversity of opinion leads at once to the question, Upon what does the action of bones depend?

Bones have been found to be composed of two distinct classes of constituents, one of which is organic and the other inorganic; then, upon which of these classes does this action depend?

By burning we free the bone of all its organic matter, and of course leave only the inorganic to perform its action upon the soil; but it is seldom that we meet with a genuine article of burned bone in the market. That which is not pure raw bone is usually from bones which have been boiled to extract the oil, and afterward ground; by the operation of boiling a portion of the gelatine is also removed; the bones are therefore made less rich as a manure

Some who are in the practice of using dust from boiled bone argue that it is more economical to do so, for nothing is lost but the animal matter, which can be purchased at a lower rate and afterwards mixed with it. This would be well enough if one pound of raw bones would decrease in weight in proportion to the amount of animal matter which is removed; but is such the case? It will be found on experiment that one ton of bones taken in a fresh or raw state and boiled, will, when in marketable order still weigh a ton, and often more, notwithstanding a considerable amount of animal matter has been removed; it is generally supposed that the bone will absorb at least enough water to supply the place of the animal matter extracted by boiling.

Upon account of being more readily ground, the boiled bones usually sell somewhat lower than pure raw bone, but it would require a very nice calculation, (too nice for a farmer,) to tell whether the difference in price is equivalent to the difference in value.

From the amount of water which is absorbed in the process of boiling or steaming, the boiled bones will act much quicker and more vigorously, but of course when this is the case, their action is not as prolonged as when the raw bone is used. I have applied both, side by side, at the rate of one thousand pounds per acre, and do not see much if any difference in their action, though from other experiments I am in favor of using the raw bone, ground as finely as possible, for I am satisfied that if it does not act quite as vigorously, (which is not yet proved to be the case,) it will continue to act much longer.

I have heard others complain that no kind of bone dust, if put on in the spring, would act that year. This has not been my experience, after using from

twenty to thirty tons of bone during the last five years, for I have found it to affect the crop very materially in less than two months after the application. Some say this is because I put it on so heavily; but if half a ton to the acre will produce a given effect in two months, a smaller amount ought to produce a proportionate effect in a given time.

My opinion is, that at a difference of five dollars per ton, the unburned bone is the cheaper of the two, and hence I make use of it in preference, and prefer to have it as far as possible, for then I consider that it acts quicker and better than when in the form of "half inch bones."

If any of the readers of the *Telegraph* have any experience with home-made phosphate, I hope they will communicate it through your columns.—*Cor. Germantown Telegraph.*

BROOM-CORN CULTURE.

A correspondent in Schenectady, New York, gives the following on broom-corn culture in that State communicated to the Agricultural Department:

The ground is carefully ploughed, harrowed, and rolled, and between the 1st day of May and the middle of June planted in rows by a horse-power seed-planter. When the plant is about two inches high it is thoroughly weeded; when about six inches up the earth is removed from the sides of the rows with a scarifier, and the space between the rows made friable; and when the plant is about two feet high the earth is thrown to the rows with a double mould board plow, and it is then left for the brush to develop. In sixty days from planting the brush is fully out, and it is then broken about two feet from the lowest branches, and after one day it is cut with a stem of six or eight inches, and taken to the comb or thresher (two revolving spiked cylinders) driven by power, and the seed removed; thence it is carried to dry houses, and placed on slats or poles in tiers with one foot space. After being dried it is sized and packed into bundles ready for manufacturing into brooms.

Broom-corn farmers prefer cuttings when the brush is green, as the green broom is more salable in the New York market than the red (ripe) brush. Experiments have shown that they are equally durable. Red or ripe brush exhausts the soil more than when harvested early. The first scrapings of seed are only fit for manure; the second is half as good as oats, and the third makes an excellent feed for horses and cattle, and is found to be a superior feed for milk cows in the winter months. The haulm when properly cured and housed, makes a good fodder. One bushel of good seed will plant ten acres of bottom land.

Why is a prosy preacher like the hub of a wheel? Because the fellows are tired.

ANALYSIS OF MANURES.

M. Baudrimont, in an important paper on the *Analysis of Manures*, criticises the process of M. de Gasparin for calcining the substance to be analyzed, and afterwards submitting it to a current of carbonic acid to recarbonate it, he adds, "having made many analyses of manures, I have been obliged to try another process, which I made known some years ago. The process consists in watering the calcined process with a solution of carbonate of ammonia and drying out the moisture in an oven. I have assured myself at the temperature of 58°, the excess of carbonate of ammonia completely evaporates, and the substance loses all its alkalinity, and is entirely recarbonated. I may add that the ash of Peruvian guano, on several hundred analyses, has never given an increase of weight by the addition of the carbonate of ammonia, which is due to the fact that this product does not contain lime enough to transform all the phosphoric acid in a tribasic phosphate. If we dissolve the product of the calcination in diluted nitric acid, and if, after filtration, we precipitate by ammonia, we obtain all the tribasic phosphate of lime possible with the lime contained in the manure. If, after the first operation and a new filtration, we add nitrate of lime to the ammoniacal liquor, we obtain a new precipitate of a tribasic phosphate. On a close observation, it will be perceived that, to weigh the phosphoric acid contained in the guano, in the state of tribasic phosphate, it is necessary to add a salt of lime to the liquor before using ammonia. Peruvian guano contains volatile carbonate ammonia; then, if we dry this product, we find, on analyzing, a loss of nitrogen. When ordinary guano contains 0.16 of nitrogen, that which has been dried contains only 0.12. The knowledge of this fact is useful to the agriculturist, for it is important to fix the quantity of nitrogen which can be lost without any effect on vegetation. For this purpose plaster can be used, as it transforms the carbonate of ammonia into sulphate, which is not volatile."

MANURE FROM DIFFERENT KINDS OF FEED.—The following table was prepared by Professor Lawes, from actual experiments made in England, showing the comparative value of a ton of manure made from various kinds of food given to cattle:

Decorticated cotton seed cake.....	\$27.86	Indian corn.....	\$6.65
Rape cake.....	21.01	Malt.....	6.65
Linseed cake.....	19.72	Barley ..	6.32
Malt dust.....	18.21	Clover hay ..	6.64
Lentils.....	16.51	Meadow hay ..	6.43
Linseed.....	16.65	Oat straw.....	2.90
Tares.....	15.75	Wheat straw.....	2.68
Brans.....	15.75	Barley straw.....	2.35
Peas.....	13.33	Potatoes.....	1.50
Locust beans	4.81	Mangolds.....	1.07
Oats.....	7.40	Swedish turnips.....	.91
Wheat.....	7.08	Common turnips.....	.86
		Carrots.....	.68

TOO MUCH LAND.

The great error with our American agriculturists is a morbid desire to own and occupy more land than they can cultivate. Farming is a scientific business, and is capable of being reduced to rules as precise and accurate, and we may add, as successful as those which regulate the manipulatory process of the practical chemist. Washington, whose discriminating powers were certainly of the highest order, in one of his valuable epistles to the celebrated Arthur Young, says:

"The agriculture of this country is indeed low; and the primary causes of its being so is, that instead of improving a little ground well, we attempt too much, and do it ill. A half, a third, or even a fourth of what we mangle, well wrought and properly dressed, would produce more than the whole under our system of management."

Few apothems uttered by the sage of Mount Vernon are possessed of greater force than this, even at this day, and it would be well for our agriculturists who are so anxious to extend the limits of their farms, without manifesting any farther desire to augment their productiveness and profit, if they would ponder it more carefully, and act more in accordance with the system which it suggests. The most successful farmer with whom I have ever met, in any country, was a man whose entire homestead consisted of but fourteen acres. Like the Roman, Cressian, he managed to admirable advantage everything within the amplitude of his profession, and derived, from his limited scene of operation a living far superior in point of comfort and respectability to that obtained by his more laborious neighbors, from farms, or freeholds, rather, quadruple the extent. We may form something like a correct conception of the actual capabilities of the soil, under proper management, by witnessing the operation of our gardeners. What is done or accomplished on a small scale, may certainly, with due care and effort, be accomplished on a large one, for gardening, which is so profitable, is nothing but farming in miniature.—*Germantown Telegraph*.

POISON OAK.—Having suffered severely and often from the effects of the Poison Oak, I can recommend to those similarly troubled, a cure quite as effective and much less disagreeable than Iodide of Potassa, as published in your last number. The application of coal oil to the parts affected, twice or three times daily, will afford speedy relief and in a few days effect a cure, as I have proved in my own case, several times this season, and for the last time this week. I am pursued that in cases of erysipilis, Coal Oil will prove equally effective.—*Cor. Southern Cultivator*.

DIFFERENT KINDS OF MANURE.

I wish to say a few words about the quantity and quality of the different kinds of manure made by our different domestic animals.

I do not think as a general thing our farmers properly estimate the difference in the value and quantity of manure made by our animals. Experiment has proven that for every one hundred pounds of fodder fed to a horse he will make two hundred and sixteen pounds of green or forty-six of dry manure. With different kinds of feed the amount of manure will vary, but these amounts are taken as an average. One hundred pounds of oats will make two hundred and four of green and fifty-one of dry manure.

One hundred pounds of roots will give, when fed to a cow, about fifty pounds of green manure and about eight when thoroughly dried. Without reference to the kind of stock to which they are fed, one hundred pounds of roots will make one-half their weight of green or one-twelfth the weight of dry manure.

Soiling crops will give about the same amount of green manure as roots, but it will amount to about one-eighth when dried.

One hundred pounds of oats fed to sheep will yield one hundred and seventeen pounds of green or forty of dry manure; the same amount of potatoes will give thirty-eight pounds of green or thirteen pounds of thoroughly dried manure.

Our practical farmers seem to have very different ideas as to the comparative values of the different kinds of manure; in my estimation they should be valued in the following order, viz:—chicken, sheep, horse, pig, barn-yard manure, cow and young stock.
—*Cor. Germantown Telegraph.*

COAL ASHES.—During a recent visit at the residence of Robert J. Swan, of Geneva, N. Y., says the *Cultivator and Country Gentleman*, he informed us that he had kept his currant bushes entirely free of the currant worm by the use of coal ashes. He applies them in spring by covering the ground about each bush four or five inches deep or more, and for a distance of two feet on each side. The mechanical sharpness of the ashes prevents the soft larvæ from rising through them. Although the season of fruit had passed when we saw the bushes, they showed great thriftiness, and uninjured leaves.

The same application was used about the quince, with equal success, for excluding the borer—the ashes being in the form of small heaps about the stems. From twelve bushes, he gathered this year sixteen bushels of very fine quinces.

By burning a small quantity of sulphur in and near place infested by ants, it is said they may be driven off.

UNDERDRAINING PREVENTING DROUTH.—A neighbor recently expressed his great surprise at the result of an accidental experiment which he had performed this season. The country, it is well known, has suffered severely in some places for a want of rain, and the result was therefore the more striking. He planted a small field with potatoes, one row of which was immediately over an underdrain. Here he expected to find the soil the driest, and the potatoes burnt up for want of moisture. He found exactly the reverse—this row yielding about double the others. The drain had prevented the soil from becoming watersoaked in spring and from baking hard in summer, and had kept it loose and porous. The increased depth to which it had been worked in digging the ditch, had added to the increase of the crop. This was a simple and convincing experiment of the combined advantages of subsoiling and draining.—*Country Gentleman.*

THOROUGH TILLAGE.—At one of the Irish Agricultural meetings, one of the speakers remarked, and the truth may be well applied in this country:

“What brought out the immense agricultural wealth of Scotland? and what enables the small farmer in Belgium, who, on 7 or 8 acres of light, sandy land, was able to do better for himself and his family, than we can do on twenty or thirty acres of land in this country? It was not by allowing three fourths of a light tillage farm to remain in poor herbage, and making the other portion pay the rent. It was because the farmers in these countries he alluded to, made agriculture a study, a duty, and a pleasure, and because no man there would keep one single acre of land more in his possession than his capital and his means would enable him to cultivate.”

THE PEA WEEVIL.—It is stated that the New Jersey market gardeners prevent the pea weevil from destroying the germ in the early peas which they winter for seed by sprinkling the heap with spirits of turpentine after winnowing and before storing in the bins. One quart of turpentine is sufficient for fifteen twenty bushels of peas.

RAMIE is a species of silken hemp, a native of Java, and is capable of being worked into the finest of fabrics. At from forty to sixty cents per pound, it is estimated that the produce per acre will be about \$600. It requires great care in its culture, and some three or four years must pass before the cuttings will become productive.

If you wish to keep eggs for setting, place the small ends down in bran and oats so that the yolk will not adhere to the shell.

Agricultural Crochets.

Many a first-rate farmer has a crochet in his head, which he is very likely to dilate upon in his conversation, and if he be of a writing turn, to announce and defend through his agricultural paper.

Thus one man recommends the use of salt in the hay mow to preserve hay. Now it would be absurd to suppose that the small quantity recommended—a quart or so to the load—could have any particular effect upon the hay any way, but what little it would have must, without doubt, be injurious. Salt, in the impure state it comes to us, as every one knows who will reflect a moment, draws dampness from the atmosphere. In a store room this does not appear, and hence the salt in the salt-cellar, upon the table, is dry, but when exposed in an open building, like a barn or any out-house, it attracts moisture and becomes damp. For this reason it must injure the hay by dampening it.

So another man urges the use of lime upon hay. Used in the form of slaked lime—and it is not recommended in any other form—it can have no effect whatever upon the hay to which it is applied, except to render it dusty, and more or less injurious to the animals who are compelled to eat it. It neither dries it nor dampens it, nor sweetens it if sour. Its use is not sustained by reason nor common sense.

Another man says that he has found by planting potatoes of different kinds in the same hill he gets a better yield; and he gets the strongest possible indorsement from an agricultural editor of one of the most extensively circulated journals of the country.

Now the truth is, this is all *bosh*. You might just exactly as well expect streaked apples to grow in an orchard of greenings and spitzenbergs. Graft a scion from the greening forever, and you have the greening still, it is only the old original greening prolonged. So, for example with the garnet Chili potato. Plant it where you will, it is only an offshoot of the original plant which Mr. Goodrich raised twelve or fifteen years ago from the seed. It is only the original plant drawn out and spread over.—Plant your different varieties together; after they blossom and bear fruit, if you gather it, and the next spring sow it, you will stand a chance to get a mixture, or cross, but not before.—*Utica Herald*.

THE ILLUSTRATED ANNUAL OF PHRENOLOGY AND PHYSIOGNOMY FOR 1858—contains a rich collection of original and timely articles, among which are the Marriage of Cousins, and the effects; Advancement of Phrenology; Circassia, and the Circassians; Jealousy—Its Cause and Cure; George Peabody; Senator Wilson; D'Israeli; Peter Cartwright; Victor Hugo; Miss Braddon; How to Become a Phrenologist; Monsieur Tonson, with 12 Illustrations; Mind Limited by Matter; Two Paths of Womanhood, Illustrated; Bismarck; To Phrenological Students; Phrenology and its Uses. The whole profusely illustrated; pp. 84. Price, 25 cents. Address S. R. Wells, 329 Broadway, Office Phrenological Journal, New York.

HOW TO WHITEWASH.

Procure fresh-burnt lime, not that partly air-slacked. The large lumps are best. The fine portions and small lumps will not make a wash that will stick well. For this reason, lime that has been burned several months is not as good as that just from the kiln. Put a pound or two in a vessel, and pour on water slowly, until it is all slacked, and is about as thick as cream. Then add cold rain water until it will flow well from the brush. Stir often when using it. A few drops of bluing added will give it a more lively color. One or two table-spoonfuls of clean salt, and one fourth pound of clean sugar to a gallon of the wash, will make it more adhesive. If the walls have been whitewashed, let them be swept thoroughly, and if colored with smoke, wash them clean with soap-suds. A brush with long, thick hair will hold fluid best, when applying it overhead. If a person has the wash of the right consistence, and a good brush, he can whitewash a large parlor without allowing a drop to fall. When it appears streaked after drying, it is too thick, and needs diluting with cold water.—Apply the wash back and forth in one direction, and then go cross wise, using a paint-brush at the corners, and a thin piece of board to keep the brush from the woodwork, or the border of the paper.—Coloring matter may be mingled with the wash, to give it any desired tint. To make a light peach-blow color, mingle a small quantity of Venetian-red. For a sky-blue, add any kind of dry, blue-paint, stirring it well while mixing. To make a wash of a light straw-color, mingle a few ounces of yellow ochre, or chrome yellow. The coloring matter should be quite fine, to prevent its settling at the bottom of the vessel.

A small quantity of green paint and a little red will form a desirable color for out-door work. The true way to blend colors is to take a small quantity of the wash in a vessel and mix a little at once, marking the proportions of each kind.

When buildings or fences are to be whitewashed, prepare the wash as directed above, keeping it warm when using it, by means of a kettle of burning coal; and mingle about a pint of good paste made of wheat flour with a gallon of the wash, and also half a pound of salt and half a pound of cheap sugar per gallon of the wash. These materials will make it stick well, and, if applied quite warm, will look well and be durable.—*Selected*.

SALT AND PLASTER.—Nearly all land dressed with a sowing of common salt, say eight bushels, and of plaster paris, say one bushel to the acre, will be much benefitted. Dwarf pear orchards and old vine yards will especially receive benefit from such application.—*Horticulturist*.

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THE ENGLISH WHEAT HARVEST.—The wheat yield of England is light this year. As threshing progresses, the deficit becomes more apparent. The quality is variable, the weight running from fifty-five to sixty-four pounds, much of it under sixty pounds per bushel. The deficiency will be greater than at first supposed. The imports into London for four weeks in September were 1,318,592 bushels, against 474,840 bushels during the same time last year. The entire imports of the United Kingdom for the four weeks ending September 14, were 2,998,037 cwt. wheat, and 184,297 cwt. flour. Russia, as heretofore, furnishes the larger portion.

France will also be in the wheat market for large purchases this year. Any surplus the United States can furnish will be taken in Europe, at rates remunerative to our farmers.

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Subscription to the *RURAL* alone \$3 per year—to the *FARMER*, \$1.50—both for \$3.50.

THREE FOR \$5.

The "*Rural New-Yorker*" \$3—The "*Southern Cultivator*" \$2, and the "*Maryland Farmer*" \$1.50 per year, will be furnished at \$5 for the three. Thus for \$5 can be secured one first-class weekly and two standard agricultural monthlies. Subscriptions can commence at any time.

THE WHEAT TRADE OF THE WORLD.—A recent French calculation gives the price of wheat per quintal in various countries and at various points, as follows: France, 35f. 50c.; Algiers, 32f.; Bona, (Algeria,) 34f. 50c.; Brussels, 38f.; Antwerp, 34f.; Bruges, 40f.; Namur, 37f.; Cologne, 34f.; Frankfurt, 31f.; Rotterdam, 42f. 85c.; Geneva, 33f. 50c.; Turin, 31f.; Liverpool, 36f. 25c.; London, 37f. 75c.; St. Petersburg, 26f.; Odessa, 29f. 70c.; New York, 29f. 75c.; and Valladolid, (Spain,) 32f. 50c. The highest price would thus appear to have prevailed at Rotterdam, and the lowest at Odessa.

The Harvest of 1867 Throughout the World.

The Boston *Journal*, in an elaborate article, shows that the countries which will be compelled to buy breadstuffs between the present time and next harvest are Great Britain, France, Belgium, Portugal, Spain, Switzerland, Italy, Algeria, Tunis and Morocco; while the countries which will have grain to sell are the United States, Canada, Chili and some of the other South American States, Russia, Turkey and the Danubian Principalities. It adds:

The stocks of old wheat in Great Britain and France have not been so low since 1854 as they are at the present time. Large purchases of wheat have been made for some time past on French account in the Eastern ports. The French Government has intimated to its citizens that large purchases of breadstuffs would be expedient. For many years past the imports of wheat in Great Britain have steadily increased. This has been owing to the increase of population, the improvement in the rate of wages, and the more liberal expenditure of the people; and to these causes is now added the necessity of supplying the deficiency caused by the partial failure of this year's crop. The following are the amounts of wheat imported into Great Britain since 1845, taking periods of five years together:

	Quarters.
From 1846 to 1850	18,522,867
From 1851 to 1855	21,415,726
From 1856 to 1860	26,896,936
From 1861 to 1865	30,908,381

The average price of British wheat for the week ending September 7th was 62s. 5d. per quarter; but for the corresponding week in the years 1863 to 1866, inclusive, the prices were respectively 44s. 2d., 42s. 3d., 46s. and 47s. 3d. per quarter. The present high price in England is drawing large supplies thither, and for the first eight months of the present year the imports were about 5,000,000 cwt. in excess of last year.

These facts are favorable to a maintenance of the high prices of wheat, which are now filling the pockets of our farmers with greenbacks.

PLOUGHING.—While the ploughs were being tried at the fair ground, the other day, Major Sutherlin, president of the society, and General Imboden, of Richmond, were pitted against each other, to see who could run the best furrow. It was almost as interesting as a trial of speed between two trotters, and attracted general attention. They both showed ability to manage the plow-handles, and either one could no doubt earn ten dollars per month wages on a good farm. This cannot be said of many a strong young man who is looking out for a wife.—*Danville (Va.) Register*.

The American Fruit Culturist.

BY J. J. THOMAS.

The Publishers of the "MARYLAND FARMER" will send the above Book *free*, by mail, as a premium to any person who will send us five *new* yearly subscribers and \$7.50.—This is a valuable book of 512 pages, and should be in the hands of every fruit culturist—price \$3.

Maryland State Agricultural and Mechanical Association.

The annual meeting of this association, for the election of officers to serve the ensuing year, took place on October 31st last, at the rooms of the society, No. 69 West Fayette street, with the following result:

President—William Devries.

Vice Presidents—Baltimore city, Henry M. Warfield; St. Mary's, Colonel C. Billingsley; Anne Arundel, Dr. Eli Henkle; Montgomery, A. Bowie Davis; Baltimore county, Wm. Gilmor, Jr.; Queen Anne's, Dr. W. H. DeCoursey; Prince George's, C. B. Calvert; Harford, Ramsay McHenry; Cecil, William M. Knight; Charles, John W. Jenkins; Kent, D. C. Blackiston; Worcester, W. J. Aydelott; Howard, John Lee Carrol; Talbot, Colonel E. Loyd; Washington, William Dodge; Allegany, Dr. S. P. Smith; Somerset, Dr. G. R. Dennis; Frederick, Col. George R. Dennis; Carroll, S. T. C. Brown; Dorchester, Col. James Wallace; Calvert, Dr. John C. Parker; Caroline, Daniel Field; Wicomico, Wm. J. Leonard.

General Secretary—B. H. Waring.

Corresponding Secretary—E. Law Rodgers.

Executive Committee—James T. Earle, Colonel E. Wilkins, E. G. Ulery, Charles M. Dougherty, General Edward Shriver, Colonel Oden Bowie, N. B. Worthington, Ezra Whitman, John Merryman, chairman. It was the intention of the officers of the Society to have held an exhibition this fall, but in consequence of the scarcity of funds (the State appropriation not having been paid) with which to purchase suitable ground and complete the necessary improvements, it was determined to postpone it until the next year. The \$25,000 appropriated, increased by receipts from other sources, will then enable them to purchase an accessible ground, and to offer such inducements to exhibitors as will secure an exhibition creditable to the agriculture of our State, and surpassing any previously held it this season.

THE AGRICULTURAL AND MECHANICAL SOCIETY OF ROCKBRIDGE, VA.—At a meeting held on the Fair grounds Oct. 25th, the following gentlemen were elected officers for the ensuing year:

President—Jacob Fuller; *Vice Presidents*—Col. D. H. Ross, E. S. Tutwiler, W. T. Poague, J. C. Hutten, John McKemy, J. B. Lavell, A. M. Glasgow; *Secretary and Treasurer*—J. G. Steele.

In speaking of the annual Fair of the Rockbridge Agricultural and Mechanical Society, held in Lexington on Wednesday, Thursday and Friday, the 23rd, 24th and 25th oct., the *Lexington Gazette and Banner* says:

"The Fair passed off well. The number in attendance from this and adjoining counties was large.—The horses, cattle, hogs, and other Stock was fine, and presented an admirable appearance—equal to any that has been or is likely to be exhibited this year in the State. We had very fine fruit and vegetables also on exhibition. The Fair was well gotten up—well managed—and passed off greatly to the public satisfaction. May we have many such, in coming years."

Horticultural.

DISTANCES FOR PLANTING TREES.

Persons about to plant orchards and fruit-gardens, are often at a loss to know the most suitable distances to place the trees. The guiding rule should be to allow space enough that when the trees attain full size, the sun's rays may freely enter on each side. The roots as well as the tops should have free space. As a general rule, the tops should never approach nearer than one-half their diameter.

Some varieties of the same kind of fruit grow to a much greater size than others, but as an average, the following distances may be adopted, varying with the amount of land and with the wishes of the owner, whether to obtain *immediately* a large amount from a small space, or to make a permanent orchard that shall long continue without becoming crowded.

Apples. In fertile districts of the country, where the trees may attain great size, and where there is plenty of land, forty feet is the greatest distance required. The usual distance is two rods or thirty-three feet. Where the most is to be made of the land, and where thinning-in the limbs is practiced when the trees become too large, twenty-five feet distance may be adopted. For pyramids on apple-stocks, fifteen feet; for pyramids or dwarf standards on Doucain stocks, ten feet; for dwarf round-headed trees on paradise stocks, eight feet.

Pears. Large growing standard varieties, on pear-stocks, twenty to twenty-five feet; dwarf standards on quince (with stems pruned up, two or three feet, the heads with natural growth, or slightly thinned by pruning but once a year, for orchard culture), twelve feet; pyramids on pear-stocks, twelve to fifteen feet; on quince, ten to twelve feet. It should never be forgotten that pears on quince should be so placed as to admit of high or enriching cultivation.

Peaches. It is usual to allow about twenty feet for peach-trees that are never shortened-in, but permitted to spread out and take their natural course. But if shortened-in annually as they should be, or even triennially, by cutting back three year branches, they may occupy only twelve or fifteen feet. Peach-trees budded on the plum, which reduces their growth a little, may be kept cut back so as to require a space of only eight or nine feet.

Cherries. Common standards, twenty feet apart; pyramids on common stocks, fifteen feet; on Mahaleb stocks, ten feet. Dukes and Morellos require only three-fourths of this space.

Plums. Standards, fifteen feet; pyramids eight to ten feet.

Apricots. One-fourth more space than for plums.

Quinces. Six to eight feet.

Grapes. Most vigorously growing native sorts, on a trellis eight feet high, twenty-five feet apart; on a twelve feet trellis, sixteen feet apart.

Gooseberries and Currants. Four to five feet.

Raspberries. Three or four feet.

Blackberries. In rows eight feet apart.

For the above distances, the following is the number of trees required for an acre:

40 feet apart,	-	-	-	-	27 trees.
33 "	-	-	-	-	40 "
25 "	-	-	-	-	69 "
20 "	-	-	-	-	108 "
15 "	-	-	-	-	183 "
12 "	-	-	-	-	302 "
10 "	-	-	-	-	435 "
8 "	-	-	-	-	680 "
6 "	-	-	-	-	1,208 "
4 "	-	-	-	-	2,720 "

—Thomas' Fruit Culturist.

PLOWING UP OLD ORCHARDS.

A question frequently arises as to the best course to be pursued with an old neglected orchard, which has become covered with a dense sod of grass, and this often of an inferior character, and full of disagreeable weeds. Orchards that have been widely planted, and which have gaps from the decay of trees, especially when these have been trimmed up with high stems and long naked branches, do not cast sufficient shade upon the ground to prevent the growth of grass and weeds. These intruders occupy the surface soil to the disadvantage of the roots of the fruit trees, and we may wonderfully improve the health of such orchard by plowing the ground, and at the same time severely pruning the branches and cleansing the bark of these old trees. These good results may be continued by shallow culture of the soil, with suitable applications of manure where needed. By giving a dose of lime, or of marl, and ashes, we shall infuse a new life and growth and productiveness that will astonish and delight us, and reward us for our labors and outlay.

It may be urged as an objection to breaking up the sod, that the most careful plowman will unavoidably damage some of the roots that approach the surface, but this is an injury that must be submitted to; and after all it is not such a serious affair, and is overbalanced by the advantages of renewing the productiveness of the exhausted orchard.

MULCHING

Is a process about which much has been said and written, but of which, it is to be feared, very little is known and understood. The very objects of mulching do not appear to be properly appreciated by many persons. Its uses are two-fold: primarily, to keep the surface of the earth moist by preventing evaporation, and to maintain that open, friable con-

dition we always find in the forest, under the natural mulching of the leaves. Mulching keeps the earth cooler in summer and warmer in winter; the first, by shading from the burning rays of the sun, the second, by protecting from frost; the material itself, and the confined air among it, being bad conductors of heat. Now, what material shall we use for producing these results? Almost anything that will fulfill these indications will answer—either stones, chips, boards, twigs, saw-dust, tan bark, weeds, straw, either long or cut, coarse manure, hay, freshly-cut grass, or, perhaps the very best for all the purposes of mulching, leaves themselves, except that they are difficult to retain in their place. A combination of leaves and twigs, small branches or weeds, may be made to answer a very good purpose, for winter mulching especially. For summer mulching there is another material which has been found to answer an admirable purpose, though not mentioned in the above list; it is mellow earth—yes, mellow earth admirably fulfills most of the conditions of a good mulching material, but it must be kept mellow by constant stirring. The air is thus admitted, and deposits its moisture whenever the earth is cooler than the atmosphere; the presence of the air among the particles of the soil makes it a worse conductor of heat than when it is compacted together.

Mulching the newly planted trees is a very valuable application, whether in summer or winter, and should be practiced wherever it is possible, always remembering that we can not well combine with it culture, which, for the summer treatment, is most essential to the successful growth of trees, and in winter we shall present a harbor to the mice if the mulch be placed too near the tree. He who may have been induced, by the recommendations of high authority, to plant an orchard in a stiff blue-grass sod, or who may allow such sod to surround his trees, in the belief that this constitutes a good mulch, will be sadly disappointed; for, though the surface is shaded, the grass will absorb the moisture from the soil at the expense of the young trees. Clover, on the contrary, makes a denser shade, and seeking its supplies more deeply, is less injurious, while its abundant broad foliage attracts ample supplies of dew to irrigate the soil. In this respect it resembles the Indian corn, which is considered the best crop to put among young trees, as it produces shade, attracts the dew, and, more than all, it demands and receives the thorough culture which the trees also require.—*Warder's American Pomology—Apples.*

REMEMBER—if you ever knew it—that manure, even if long, is an excellent thing to keep knolls moist, if spread on the surface. In this way grass can be successfully grown on any uplands.

SEASONABLE HINTS.

The following we glean from the November No. of *The Horticulturist*:

EVERGREEN branches taken from the forest and planted in the ground among the shrubbery and grouped low over the flower-beds, serve to give life and cheerfulness to the grounds, and at the same time are a protection and shade to the plants, bulbs, etc., etc.

GRAPEVINES in cold houses should be freed from their upright position, and pruned, but their winter protection should be deferred as late as possible.

THE DIANA grape is said to prove one of the very best for cultivation in our Southern States.

VINEYARDS should all have the earth plowed up toward the vines late in autumn, leaving a centre furrow for the surface drainage.

SALT AS A MANURE.—Many of our readers, doubtless, have a small pasture in which they keep a cow and occasionally turn a horse. Many of these pastures have coarse grasses growing in them, while in other places the grass dries up quickly on approach of warm and dry weather. All such pastures will be greatly improved, and often the coarse grasses will entirely disappear, if a harrow is passed freely over back and forth during this month, and salt at the rate of eight to ten bushels to the acre be spread over the ground.

ROSES for window blooming should be potted in good rich soil, cut back freely, then kept in cool frames for a time before bringing into the room for winter.

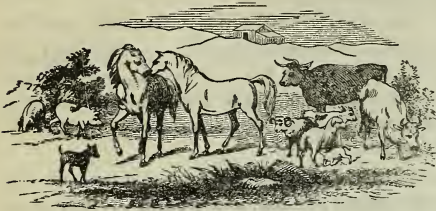
LILLIES and other hardy bulbs should have a good covering spread over the bed of coarse straw manure.

PITS or FRAMES for winter stowing of plants should be ready. Make them two to three feet deep, and when they are well drained, place the pots in leaf-mold from the woods, give air freely and shade from hot sun; when severe weather sets in, have ready a quantity of straw, old hay, etc., for spreading over the sash.

CELERY for winter use should be stored in trenches made the exact depth of the plant, and ten to twelve inches wide. Take up the plants on dry days only, and pack closely in the trenches. On the approach of severe frosts, cover with two or three inches of straw litter, increasing the quantity as the weather grows colder, until the covering is at least one foot in thickness.

CLEAN up the lawn and roads, paths, etc., this month, raking and gathering the leaves into a heap for use in forming hot-beds next spring. Rake and roll the walks so that they present a neat, firm, and clean appearance.

Live Stock Register.



DIFFERENT BREEDS OF SWINE.

Without dwelling on the management of swine, or making a long preamble to the direct discussion of the subject, I will commence at once to point out some of the points of the different breeds of these animals.

The *Berkshires* will first be brought on the "carpet." These swine are black, which color seems to be objectionable with many, although not a serious fault. They mature early, fatten well on limited quantities of food and are excellent breeders. It is claimed that they are less liable to disease than any other breed and that their flesh is the most delicate pork while the live animal is the most hardy.—They have grown to an immense size, and are a good breed for crossing with others. Next we will call up the *Suffolks*. These were imported from England by James Stickney, of Boston. In their "native land" they are considered the most profitable breed. They possess most of the good qualities of the *Berkshires*, are not black like them, and if well kept and taken care of, they will make the best selling pork. Until lately they were probably the leading breed of this country.

The *Chester County White*, seems to be the most popular breed at the present time. They originated in Chester county, Pennsylvania, and have been disseminated quicker than any other breed. The following are some of their "good points." They are pure white, have hair enough to stand a Northern winter, "fatten well at any age, are quiet and not inclined to roam, and fatten well in good clover pasture." "They will make more pork in a given time with a given quantity of food than any other breed."

The *Essex* is another breed of black, or black and white swine, and as yet but little known in this country. They are much admired in England more for the delicacy of their flesh than the size they attain, which is not as great as many other breeds.

The *Chinese* hogs are rather small, and are valuable chiefly for crossing with large coarse-fleshed breeds. The fine quality of their flesh renders them

especially valuable for this while their small size condemns them for universal adoption as pork making animals.

There is a breed in the West known as *Irish Graziers*, which are described as being "as long as a rail," but are said to make an excellent cross with the *Berkshire* or other large breeds.

The *Bedford* or *Woburn*, is an English breed not generally introduced in this country and therefore of minor importance. Not being acquainted with them, I will not describe them.

There are many, in fact, the chief part of the swine raised that belong to no particular breed, but are called by various names in different sections of the country. In one district they may be called *Landpikes*, in another *Alligators*, *Elm Pealers*, *Prairie Rooters*, *Subsoilers*, *Potator Diggers* and a host of other names equally appropriate. Their characteristics are long legs, ensuring great speed when pursued; long noses, capable of stirring the soil thoroughly; long ears, like leather aprons, and long bodies. They are a long breed throughout, require long feeding, and have been the universal stock for a long time. All of which is submitted by one who would rather grow pork than to eat it.—*Cor. Am. Stock Journal*.

HOG CHOLERA.

Jacob Fuller, Esq., President of the Rockbridge Agricultural and Mechanical Society, communicated the following to the *Gazette and Banner*, of Lexington, Va.:

"Thinking that I may, perhaps, do a good service at the present time, when the hog cholera is prevailing to so alarming extent, I send you a recipe obtained recently from Dr. Smith, of Buffalo Springs.

The Dr. assured me that he had made repeated tests of the efficiency of this recipe, either as a preventive or a cure in numerous cases and with animals in all stages of the disease and had seldom met with a failure to cure.

RECIPE.—"To one peck of corn, saturated with or dipped in water, put one ounce Spts Turpentine, one half ounce of Salt Petre (pulverized) and one pound of unslaked lime, all stirred minutely together."

The above quantity to be fed to 20 Hogs at one feeding."

ONE of the "bureau" officials, while traveling last week in the cars in Alabama, noticed a lady with a negro girl in attendance, and he remarked:

"Madam, I see you have one of my children."

"Yes, sir," replied the lady, "I perceive the resemblance."

A slight tittering was observed in that part of the car, and the "bureau" left.

REMARKS ON BREEDING.—To a farmer beginning improvement, the best advice is, to get as good a bull as he can; and if he has a good one of his kind, to use him indiscriminately with all his cows, and when by this proceeding, which ought to be persisted in, his stock has, with an occasional change of bull, become sufficiently stamped with desirable excellencies, his selection of males should be made to eradicate defects which he thinks it desirable to get rid of. He will not fail to keep in view the necessity of good blood in the bulls resorted to, for that will give the only assurance that they will transmit their own valuable properties to their offspring; but he must not depend on this alone, or he will soon run the risk of degeneracy.—*Berry.*

CARROTS FOR HORSES.—Horses are especially benefited by the use of carrots. They should be fed to them frequently with their other food. The carrot is the most esteemed of all roots for its feeding matter than any other root, eighty-five per cent. be qualities. Analyzed it gives but little more solid ing water; but its influence in the stomach upon the other articles of food is most favorable, conducting to the most perfect digestion and assimilation. This result, long known to practical men, is explained by chemists as resulting from the presence of a substance called pectine, which operates to coagulate or gelatinize vegetable solutions, and favors this digestion in all cattle.—*Am. Stock Journal.*

APPLES FOR COWS.—Ripe and mellow apples fed carefully to cows will produce an extra secretion of milk. Sweet apples are doubtless preferable for this purpose to sour; yet the latter, when not too acid, are a valuable feed, and should be given in small quantities as long as they can be preserved sound and free from rot. To apply the produce of the orchard in this way is much more economical than to make it into cider.—*Am. Stock Journal.*

DRY COWS.—A correspondent in the *Germantown Telegraph* says:

On no account stint a cow in food because she is dry, for if you do, a poor calf will be the result; for while dry the cow has two lives to support, hence the fact of her going dry, that the substance before given in the form of milk may go in the form of food for the calf.

FAST.—Mr. Alexander's celebrated bay colt Lancaster, at the recent Lexington races, made the quickest two mile time on record—3.35½, and consequently wears the belt.

O. Aylworth, Fabius, N. Y., wrote to the New York Farmers' Club that a teaspoonful of turpentine placed in a barrel of water will kill the wigglers which hatch into mosquitoes.

USEFUL RECIPES.

RHEUMATISM IN HORSES.—The treatment of this disease must be based on the tonic principle; all exhausting remedies, such as bleeding or purgatives, must be abandoned. In the chronic form of the affection, treatment has generally been attended with only a partial success, and there is always a probability of a return of lameness. Various internal remedies have been at different times exhibited, and among others, colchicum, both the extract and the powder of the dried "corm," without a result sufficiently satisfactory to warrant the recommendation.

All kinds of stimulating liniments have been tried in the acute form of the disease without any marked benefit—but a good blister repeated once or twice has generally been found to remove the disease, and secure the limb against a second attack.

Debility to some extent is generally present, and must be combated by tonics and liberal diet; alkalies are valuable agents in these cases, and counter-irritation with the ointment of the biniodide of mercury may be estimated as the principal of remedial measures.

SWEENEY IN HORSES.—We have used the following liniment with perfect success, and have never known it to fail in any of the numerous cases of sweeney to which we have seen it applied. We think it may be considered a certain cure, unless in instances of very long standing where nothing can successfully reach it: Alcohol, 1½ gill; turpentine, ½ do; hartshorne, ½ do; sweet oil, ¼ do; oil of ergatum, ¼ do; oil of wormwood, ¼ of an ounce.

The above mixture is to be applied twice a day to the part affected, carefully, as wherever it comes in contact with the skin, the hair is temporarily removed. Keep the part well greased if it becomes sore, and after a few applications, drop off twice a day to once in two or three days, until the liniment is used up.

WARTS ON HORSES.—Mix equal quantities of spirits of turpentine and sulphuric acid, stirring slowly in a tumbler, and afterwards bottle the ingredients. Rub the grease around the base of the wart with a feather once or twice a day, it will gradually eat it off.

RHEUMATISM IN TURKEYS.—Mix a little alkali, such as carbonate of potash, in the water or food, and give them plenty of nutritious food, bathe the parts affected with some linament, avoid all violent purgatives or other remedies which tend to add to the debility upon which in all probability, the malady depends.—*Above from Am. Stock Journal.*

CHICKEN CHOLERA—SYMPTOMS AND CURE.—You ask for information in regard to what is known as the chicken cholera. I have lost since July over 200 chickens, besides one very large turkey gobbler and one turkey hen. I caught, recently, a chicken that was sick, killed it and opened its craw, and found therein a number of small worms like a caterpillar, about three-fourths of an inch in length, with a few hairs on them. I have noticed a great many of them crawling about the premises, and suppose they had something to do with their sickness. I caught one or two chickens that were unable to walk for a day or two, (and no doubt would have died in a short time,) and melted a little lard in a teaspoon, with the addition of a very little black pepper, (ground,) and gave it to them, which cured them in a very short time. They are now as well and lively as they ever were. Their disease answered your description exactly.—*J. E. NICHOLSON, Rural Am.*

It is well that virtue is its own reward, for it rarely obtains any other.

The Poultry House.

CHICKEN CHOLERA.

BRAG HILL, Baltimore Co., Nov. 11th, 1867.
To the Editors *Maryland Farmer*:

I have just been reading your valuable *Maryland Farmer* on "Diseases of Poultry or Chicken Cholera." Permit me to give my experience for the good of poultry raisers. We have some of the finest chickens in the United States, a sweeping assertion, but a true one. Our location is high and healthy; for four years good luck attended my poultry; the neighbors far and near would give any price for a setting of our hen's eggs. But, alas, cholera came. In the morning, at feeding time—all would be well—by noon, three or four dead. The symptoms were a droopy, stupid look; feathers, as our servant expresses it, all of a strut, and a watery substance running from the beak—the gills and comb turn white, ending in death. I determined to try every means until I met with an antidote. A teaspoonful of paregoric to one; to another, the same of French brandy; this was not successful in every case. At last I cried "Eureka." A teaspoonful of melted lard with plenty of Ceyenne pepper, to stimulate the craw, has proved infallible in every case.

Respectfully yours,

E. F. FRAMES.

FEEDING FOWLS.—Fowls are partial to most kinds of vegetables when cooked, eating them as readily as grain and with manifest advantage as a change of diet. They are fond too of flesh, especially of horse meat and beef, if cooked, and supplied at suitable intervals. Refuse meat from the butchers' stalls can be disposed of more profitably to fowls than to curs, the majority of which are good for nothing except to worry sheep or to make night hideous by their howlings.

ABOUT SETTING.—Some hens have the incubating fever so strong sometimes as to render it difficult to get them to give over the notion of setting when they are not desired to do so. To cure them of this, various plans are resorted to. Sometimes they are treated to tossings into the air—successive immersions in cold water and other chastisements according to the temper and knowledge of the owners. A man in Ohio says he cures them by tying the hen to a stake near a path which is frequently traveled, giving a play of string of three or four feet. It is said that one day's confinement in this way, with the frequent scares she will get, will put all setting notions out of the hen's head.

From Ellwanger & Barry, Rochester, New York, their Descriptive Catalogue of Ornamental Trees and Shrubs, Roses, Flowering Plants, &c., for 1867-'68,

The Apiary.

WINTERING BEES.

I have been a bee-keeper for over forty years, and did think of giving my experience for the last eight, but it would make my communication too long. I will therefore confine myself to a short sketch on wintering bees.

If a man loses his bees in wintering, it is for want of knowledge, or neglect on his part. I lost four stands this spring, through my own carelessness.—These are the only bees that I have lost in wintering for the last eight years. On the 18th of February (it being a fine day, and the snow gone,) I took my bees, now numbering fifty-seven stands, out of my bee-house. Having flown well through the day, I returned them to the bee-house at evening. Nine of the number being light, I set them by themselves. Four out of the nine were lost by my neglecting to give them honey in due time.

My bee-house for wintering is built of logs laid up double, with a space of about five inches between. This space is filled with dirt tightly packed in.—The height is about six feet, but should be six feet and a half. Logs are laid across the top, and a little straw put on to keep the dirt from falling through, then covered with about six inches of dirt. The house stands lengthwise, north and south, with the door in the south end, and a hole in the north end down level with the floor, three feet wide and six inches deep. This hole and the door are left open until the floor is well frozen, which keeps the house dry, and the combs will not mould.

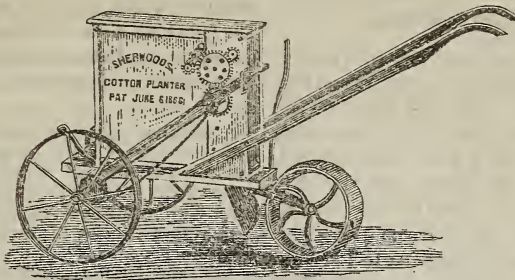
There are two air chambers sunk below the surface of the floor; one across through the middle, the other at the end. They are eighteen inches wide and three feet deep. These chambers are covered with lath, so that the air can come up freely. There is an inch tube running in on each side of the middle chamber, and one at the end of the end chamber. There are two chimneys, each six inches square.

I keep my hives well ventilated at the top, with the lower entrance closed.

There is no humbug about this matter, neither is there any patent right.—ROBERT JONES, in *American Bee Journal*.

HOW I WINTERED BEES IN THE LANGSTROTH HIVE.—I placed them side by side within two inches of the ground, drove stakes in the ground, and put in shingles and old boards, so as to leave a space of two or three inches all around the hive, except in front, (which was left open). This space I filled with straw; the honey box and honey-boards were taken off, and the caps filled with straw. My bees wintered in excellent condition, and consumed, I judge, a comparatively small amount of honey.—S. P. SNOW, in *Iowa Homestead*.

SHERWOOD'S COTTON SEED PLANTER.



The above engraving represents this improvement in Cotton cultivation. The great feature claimed for this machine is the precision with which it handles the cotton seed. The inventor thus describes it:

"By means of a series of endless chain belts, upon which are placed at intervals hooks in sets which form elevator cups, in which the seed is carried from the mass of seed upward, and as it passes a point it comes in contact with a revolving brush which strikes back all the surplus seed, leaving just the required amount and no more in each cup. The seed is separated nearly as exact as it could be counted. The cups then pass on, upward and over the upper cylinder. As it passes over it again comes in contact with a second brush, which throws it out and directly down through a passage and to the bottom of the furrow which is formed, and to any depth, by the small separator. As the machine passes on, the concave roller covers and at the same time packs the earth down hard, leaving an even rounded ridge, well packed, which is a great advantage in growing cotton. It being all driven by gearing and chain belts it is impossible for a slip or stretch. It is equally impossible for it to move forward without casting out the seed (unless the operator wishes to stop the dropping, which is done by a lever, all under the control of the operator), thus making a sure feed and a regular distribution of seed, and no failure.

This is a one rowed Planter, requires but one man and a horse or mule to work it. It is drawn and worked as easy as a common Corn Cultivator. Will plant as much ground in a day as any horse can travel over. Will plant from one to ten bushels per acre as is wished." Address J. W. Mount, Medina, N. Y.

Lucy Stone once said: "There is cotton in the ears of man, and hope in the bosom of woman."—Lucy made a mistake, and got the cotton in the wrong place.

HINTS.

Much of our knowledge is derived from the briefest hints which are often received in a most unexpected manner. The most valuable inventions have been the result of a casual remark or observation. The drain tile was derived from a hint of a gardener.—The steam engine was said to have been hinted at by the steam from a tea-kettle, while the valves were made to work by machinery from the hint given by a string attached to the machine in order that he could play.

If we notice the manner in which we read an agricultural paper, we shall find that we catch a hint here and a hint there, and we may think ourselves abundantly rewarded if we can find one good hint a week in that direction. There is another way in which we receive hints, and that is directly from others. A farmer has heard of some new method of managing his affairs which he thinks an improvement over the old method, and he immediately writes it out briefly for the *Farmer*, and his neighbors all receive the benefit of it.

We are a great believer in hints, and almost any one may be valuable if rightly improved. There is said to be a *best* way for doing anything, and we most generally ascertain the best from others. Hence the advantage of visiting the operations of the man who is successful in business and collecting such hints as may aid us in our labors in the same direction. Neighbor Jones says that he always visits his prosperous neighbor over the way every winter, just for the purpose of hearing something new, or, in other words, of catching some valuable hints about farming, and this is one secret of neighbor Jones' success in farming. He argues in this way. "If my neighbor can cut two and a half tons of hay to the acre, and raise a sure crop of corn every year, there is no reason why I should not do as well as he." This is where neighbor Jones is right—*Maine Far*,

The Dairy.

Why we Don't have Good Butter.

Now farmer's wives, don't get angry with me, but look at the statement—consider it carefully and then say if we are not right. In the first place we will suppose that your cream is all right, your churn sweet, &c. Well, you churn your cream and it finally makes what we call butter, you wash it in good cool water, salt it according to taste, and rejoice in your nice fresh butter; here you call it done. It is just at this point where I am going to find fault.

There is no process of working or washing that will secure a good article of butter, or that will get all the buttermilk out till it has stood a short time, when it must be worked over the second time, after which it will keep a long time. Butter that has not been worked the second time will not keep more than two or three days in warm weather. I don't care how much pains you take with it, the buttermilk that is left in the butter becoming sour, makes your butter rancid. I have bought and sold butter in this state, and know what I am talking about; and here is where the trouble begins, you are bound to sell all the buttermilk you can and so long as dealers pay as much for buttermilk as they do for a nice article of butter we cannot expect you to do much better. I am satisfied that there can be just as good butter made in Indiana as is made in the cheese and butter regions of the Eastern States. But just so long as we pursue the suicidal policy of selling buttermilk with the butter, so long our butter will be quoted in eastern markets as western grease.—*North Western Farmer.*

CHURNING IN WINTER.—To make milk churn easy in winter, gather the cream where it will not freeze; take it over night into a warm kitchen. Scald the churn next morning before putting in the cream, and it will seldom take more than an hour to churn it. Should the milk or cream swell, put nearly a quart of hot water into it.—*Cor. Country Gentleman.*

VALUABLE ADVICE.—Keep milk cows or fat cattle in the same enclosure with your sheep; and dogs cannot molest them. This is a secret worth hundreds of thousands to farmers and the State. It ought to be published in every week's paper, and the only return we ask is for every owner of sheep to subscribe for our paper. Thirty years experience has established the soundness of this advice.

HOLDING UP MILK.—Mr. L. Morton informs the Rural American that when his cows trouble him in this way, he reaches his hand up and places the ends of his fingers on the backbone, forward of the hips, and presses down hard for a minute or so, and they always give their milk very freely.

MODE OF CURING AND PACKING MESS BEEF.

A correspondent in Buckingham county, Virginia, asks information upon the subject of packing beef. The following mode of curing and packing was furnished for the *Farmer* by the Messrs. Krebs Brothers, very extensive and reliable packers of Baltimore city:

A barrel of mess beef should be made from good and well fattened cattle, to weigh when dead about 450 pounds. Each barrel should contain 200 pounds, cut in pieces to average 8 pounds. The following cuts only are allowed in a barrel of mess beef, viz: 4 chunks, 2 pieces of the shoulder, with the large bone taken out, 6 pieces of sirloin, 5 pieces of rib, and for a heading use 6 pieces of plates, 1 rump and 1 flank. After cutting your beef as above pack it into a barrel, using to each barrel about one half bushel of Turks Island or St. Ubes salt, and about 1 $\frac{1}{2}$ teaspoonful of saltpetre. It should be packed—first, a layer of salt, and then a layer of beef, and so on alternately, with a little of the saltpetre on each layer of beef. After you have it all in the barrels fill them full of pickle strong enough to float an egg, and head it up tight.

Our Receipt For Curing Meat.

To one gallon of water, take 1 $\frac{1}{2}$ pounds of salt, $\frac{1}{2}$ pound of sugar, $\frac{1}{2}$ ounce of saltpetre, $\frac{1}{2}$ ounce of potash. In this ratio the pickle to be increased to any quantity desired. Let these be boiled together, until all the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when cold, pour it over your beef or pork, to remain the usual time, say four or five weeks. The meat must be well covered with pickle, and should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface blood, &c., leaving the meat fresh and clean. Some omit boiling the pickle, and find it to answer well; though the operation of boiling purifies the pickle by throwing off the dirt always to be found in salt and sugar.—*Ed. Germantown Telegraph.*

WAGON TIRES.—A newspaper writer says his wagon tires "wear out before they get loose," and the reason is he saturates the felloes thoroughly with linseed oil before the tires are set. The felloes are placed in hot oil for about one hour, and are thus rendered perfectly water-proof, so that the shrinking and swelling that loosen the tire are prevented.

The Washington papers state that a disease having all the indications of pleuro pneumonia is now making great havoc among the cattle in Georgetown. It attacks all the cattle in a neighborhood in the shape of an epidemic, and thus far no veterinary skill seems competent to afford the slightest relief.

CONDITION OF FARM CROPS FOR OCTOBER.

The following condition of the crops we copy from the Monthly Report of the Agricultural Department for October, 1867:

Wheat.—Our returns for October contain local estimates of the amount of wheat yielded, in comparison with the crop of last year. They are made with due consideration of differences in acreage, in appearance at the time of harvesting, and in condition and yield of grain in threshing. Full returns from the Pacific coast, the Territories, and from some of the youngest of the border States have not yet come in; a final, definite estimate in bushels, therefore, will not be made until the issue of next number. The result is gratifying to the farmers of the nation, and to consumers of flour generally. While few localities have exhibited large yields per acre, and some have caused comparative disappointment by an average product less than was confidently expected at harvesting, the sum total in bushels will exceed that of any harvest hitherto gathered in this country. It will surmount the figures of last year by forty to fifty millions; but will not reach the amount which should have been attained, upon the ratio of increase made between 1850 and 1860, by twenty millions. As an approximate estimate, upon present data, 220,000,000 to 235,000,000 bushels may be received as the crop of the entire country for 1867.

In some of the Eastern States, in Texas, and Kansas, the figures scarcely equal those of last year; in Texas the reduction is fully half. In the North-western the increase is variable and moderate, as follows: Illinois, 7 per cent.; Minnesota, 8 per cent.; Michigan, 13; Iowa, 15; Wisconsin, 16. The belt of States in the Ohio valley which suffered so unusually last year, and made but four, five, six, or eight-tenths of a crop respectively, and averaged together but half a crop, have made a heavy increase upon those figures. The largest is made by Ohio, 130 per cent., as might be expected, the deficiency having been greatest there; Indiana is placed at 85 per cent. increase, West Virginia, 51; Kentucky, 38. In the Atlantic States, the greatest deficiency last year was in Pennsylvania, and the increase there this year is 57 per cent.

The Southern States show a material enlargement in the area of wheat, from an evident intention to become more nearly self-supporting and independent than formerly. This is particularly noticeable in Virginia, Georgia, Alabama, Tennessee and Arkansas. The great decline in Texas results from several causes, one of which is the neglected and weedy condition of lands which formerly yielded good crops. Our correspondent there writes that it has been continued in his region for five years: that "up to that date the prairie farms were almost entirely harvest fields yielding from 15 to 25 bushels per acre, and now the average yield is about $4\frac{1}{2}$ bushels per acre. The causes are no doubt various, some of which can be overcome, such as proper preparation of the land and selections of early seed from the northern climate. All are convinced that the usual mode of seeding on foul land and bad ploughing will not do, and are now acting upon the belief."

The quality of wheat is greatly superior to that of last year; it is almost universally sound and dry, but in many localities there may be found from a third to a half deficient in weight, lacking in plumpness or slightly shrivelled, and passing as No. 2, being less than 58 pounds to the bushel. There is also a greater tendency to cleanliness and care in preparing the grain for the market. High prices and the marked discriminations of buyers are doing good service in this direction.

Oats.—The yield of oats has proved less than was expected in Maine, Vermont, New York, Virginia, Mississippi, Texas, Tennessee and Kentucky; in Michigan no increase over last year is reported, but most of the Western States have made a comparative gain. As in the case of corn and wheat, the majority of the Southern States added to their area in oats, and have a larger product. The quality and yield are a fair average in Ohio, Indiana, and Illinois; in Wisconsin, Minnesota and Iowa, they are generally of superior quality and have threshed out very satisfactorily. The aggregate estimate will exceed 280,000,000 bushels—about three per cent. above that of 1866.

Rye.—This grain has made a very uniform growth and yielded an average product, with few exceptions. The report indicates a larger total product than last year, and the quality is uniform in most of the States. Those which show a slight depreciation are Maine, New Hampshire, Vermont, Rhode Island, Delaware, Virginia, Tennessee and Nebraska. In the Southern States the crop is generally good. The estimate for all the States excepting those on the Pacific is 21,900,000 bushels. This is an increase of four per cent. over the product of last year.

Barley.—The barley crop is slightly deficient—about a half million bushels, or four per cent., as compared with the crop

of last year. Illinois, Kansas, Pennsylvania, New York, and all of the Eastern States except Massachusetts and Connecticut, share in the deficiency. New York being the principal grower, producing nearly forty per cent. of the crop, a deficiency there of thirteen per cent. is equivalent to half a million bushels. The comparative losses and gains of all the other States together will balance each other.

Beans and Peas.—The pea crop is one of some importance in the South, costing little for labor, and furnishing valuable aid in fattening domestic animals, particularly hogs. It is gratifying to observe that this interest has not been forgotten. In Georgia an increase of 35 per cent. is reported; in Alabama, 13 per cent.; and in South Carolina, 8 per cent. Texas, Tennessee and Maryland report an average. A slight deficiency is indicated in Mississippi, 30 per cent. in Louisiana, 25 in Florida. The bean crop in New England is slightly deficient, except in Vermont; in Virginia and Kentucky, and in most of the West, so far as it is cultivated, it has proved better than an average crop.

Corn.—The final exhibit of the corn crop will be tabulated in November. West Virginia, Kentucky, Ohio, Indiana and Illinois, a belt which suffered last year by the winter-killing of wheat, were affected by a drought of considerable severity, which will cause a heavy reduction of the general aggregate. The tenor of the reports for this district differ little from those of September. To offset this deficiency in part, an increase, ranging from 7 to 17 per cent., is reported for the States of Michigan, Wisconsin, Minnesota, Iowa and Kansas. Delaware, Virginia, and North Carolina have small crops, and Pennsylvania is slightly deficient. The States further north and east have generally shown a slight increase, and the Southern States have made a comparatively heavy increase.

The quality is uniformly good, leaving no doubt that the value of the entire crop, after deducting the deficiency in the Ohio valley, and allowing for an increase in almost all the other States, will be greater, not only in cash but in the intrinsic life-sustaining and pork-producing power, than that of last year. As the deficiency occurs in the centre of the commercial pork-packing district, it will affect unduly the market, both for corn and pork, making the scarcity more prominent, while the comparative abundance of the South will greatly reduce the demand upon the West. At the end of another season it will be shown that there was corn enough for pork, for beef, and a larger quantity of whiskey than the government will be able to collect the tax upon.

Sorghum.—The sorghum interest has greatly declined.—Frosts have injured the crop in many places, the acreage is much reduced, and dependency is evident in the feelings of many growers. It is to be hoped that greater success will be enjoyed next year, as the quality of the syrup is yearly improving.

Buckwheat.—This crop will scarcely equal that of last year. East and North of Pennsylvania there is a deficiency, varying from 3 to 9 per cent. There is no deficit in Delaware, Maryland, Missouri, Iowa, Kansas and Nebraska.—In Ohio the decrease is reported at 29 per cent., Indiana 17, Illinois 9, Michigan 6, per cent.

Potatoes.—The potato crop is a poor one this year. The heavy summer rains of the eastern coast, from Maine to Virginia, have occasioned much loss. The decline from last year is stated at 27 per cent. in New Jersey, 16 in Pennsylvania, (much more in the eastern part of the State), 17 in Delaware, 8 in New York, 9 in Massachusetts, 17 in New Hampshire and 40 in Maine. In the West the crop has suffered in some places from drought; in others from the potato bug, the well-known 10-lined spearmen.

Tobacco.—A decline in the tobacco product is indicated in the principal tobacco-growing sections.

Sugar.—Louisiana, the only State producing cane sugar to any extent, reports an increase of 20 per cent. over the small yield of last year.

Cotton.—Complete estimates will be made on the receipt of the November returns. The returns of October indicate a considerable increase in South Carolina, Georgia, and Alabama; about the same yield as last year in Mississippi, Arkansas, and Tennessee, and a marked diminution in Texas and Louisiana. All estimates below 2,000,000 bales of 400 pounds are decidedly fallacious, while present indications favor an approximation to 2,500,000 bales.

Fattening Cattle.—There appears to be a small deficiency of fattening cattle in Kentucky, Ohio, Indiana and Illinois the centre of eastern supplies. Further west and north-west, the supply is generally quite as good as last year.—In those States that report a reduced supply, there is also a reduction in condition; in all of the other States the reports upon condition are quite favorable.

Old Wheat.—A glance at the table will show a reduction as compared with last year, when the old stock was also small. The stock of old wheat has not been reduced so low for many years, if ever.

Grape Culture.

GRAFTING GRAPE VINES.

George W. Lung, Scranton, Pa., writes to the *Tribune*: "My plan, pursued for several seasons with uniform success, has been to graft as soon as the leaves of the vine begin to develop, which here has been about the 24th of May. I set scions in split stock below ground. If in the cane above ground, I lay the cane well in the ground, say six inches, and leave one bud of graft above the surface. I have three buds on the scion used, and pare so as to bring one of the buds at the shoulder of the stock. One bud is then below and one at the surface. I always feel sure of growth if my scions have been well kept. To preserve them, I take cuttings at any time between November and March, keep them in a warm cellar until the ground is thawed out in the spring, then bury them at least 18 inches deep in open ground until wanted. This care is necessary to prevent the buds from swelling in the warm days of May. If kept in the cellar they are apt to get too dry for use. I grafted Delawares into a hardy native on the 24th of May, 1862, which made 15 feet growth the same season."

GROWING GRAPES.—The more we look at it the more we become convinced that a soil enriched with manure is hurtful to flavor, and lessens the fruit. There seems also a defect in ripening. Natural soil with a fair proportion of clay and lime, and deep tillage, we are convinced is the most successful way with grapes. Deep culture gives the roots a chance; moderate growth ripens, increases fruit, both in soundness and flavor. Hence, elevated soil, which is generally dry, airy, and less rich, containing more clay and lime, with less vegetable matter—is selected for grapes. We grow more wood in the rich soil of the valley; but grapes and not wood is what we want. It is pretty certain too that we plant too close generally. The vine wants to be up in the air; that is its nature.—*Rural World*.

GRAPE CULTURE.—A German resident of this city, four years ago last spring bought ten acres of ground five miles from this city, on the rapids, and the same season planted four acres of it in grape cuttings.—While the grapes were maturing the recent summer, he was offered by a gentleman of this city \$2,000 for the chance of his crop. He refused to sell, however, and his vintage has yielded him 1,800 gallons of wine, worth \$2 a gallon, or \$3,600 for one year's crop of grapes. This is an enormous profit, and seems more like the gold-finding stories of California fifteen years ago than an incident of agriculture in Lee county, Iowa; and is strictly true.—*Keokuk Constitution*.

Varnish for Shoes.

It is a bad plan to grease the upper leather of shoes for the purpose of keeping them soft; it rots the leather, and admits the dampness more readily. It is better to make a varnish thus: Put half a pound of gum shellac, broken up in small pieces, in a quart bottle or jug, cover it with alcohol, cork it tight, and put it on a shelf in a warm place; shake it well several times a day, then add a piece of gum camphor as large as a hen's egg; shake it well, and in a few hours shake it again and add one ounce of lamp-black; if the alcohol is good, it will be dissolved in three days; then shake and use. If it gets too thick, add alcohol—pour out two or three teaspoonsful in a saucer, and apply it with a small paint-brush. If the materials were all good, it will dry in about five minutes, and will be removed only by wearing it off, giving a gloss almost equal to patent leather.

The advantage of this preparation above others is, that it does not strike into the leather and make it hard, but remains on the surface, and yet excludes the water almost perfectly. This same preparation is admirable for harness, and does not soil when touched, as lamp-black mixtures do.

EFFECTS OF PEARLASH.

If our friends can in any way teach their wives, daughters, or cooks, to keep the pearlash out of their bread, all the yellow people, especially the yellow children, who are supposed to be turned yellow by the fever and ague, and bilious fevers, will soon be turned white. It is a great mistake to suppose that the yellow countenances of the West come from bile, when it is the enormous quantity of pearlash eaten in the bread that is reflected through the skin. Bread is the staff of life, it is said—and so it is—but it is the staff of death, too, in this country. Bad bread kills about as many people here as bad rum. So many people eat poisonous pearlash for bread that they die by inches. Dyspepsia, that great monster disease of the country, that deranges the liver, brings on costiveness, and thus finally kills the human victim, is half the time "pearlash." Here in the East—out of New England—we have driven off the pearlash-saleratus cook, but not altogether.—Pearlash lives here yet in bread, but in cities and towns we have nearly whipped out the murderers. In the distant Western towns, beyond the good hotels of the lakes and rivers, Pearlash, under the name of Salaratus, is King. It is not any wonder, then, that the people of the East turn yellow West, and sicken, not of fever and ague, bilious and congestive fevers, but of pearlash three times a day.—*Journal of Applied Chemistry*.

From L. L. Whitlock, 37 Park Row, New York, "Whitlock's Horticultural Advertiser," issued quarterly from the office of All Nurseries in One. Price 50 cents per annum.

Ladies Department.

BIRTH-SPOT MEMORIES.

BY GEORGE D. PRENTICE.

Ah, how the silent memories of years
Are stirring in my spirit. I have been
A lone and joyless wanderer. I have roamed
Abroad through other climes, where tropic flowers
Were offering up their incense, and the stars
Swimming like living creatures; I have strayed
Where the softest skies of Italy were hung
In beautiful transparency above.
And glory floating like a lovely dream
Over the rich landscape; yet dear fancy still
Mid all the ruder glow of brightest realms,
Oft turned to picture the remembered home.
That blest its earliest day dreams. Must I go
Forth into the world again! I've proved its joys
Till joy has turned to bitterness—I've felt
Its sorrows till I thought my heart would burst
With the fierce rush of tears! The sorrowing babe
Clings to its mother's breast. The bleeding dove
Flies to her native vale, and nestles there
To die amid the quiet grove, where first
She tried her tender pinion. I could love
Thus to repose amid these peaceful scenes
To memory dear. Oh it were passing sweet
To rest forever on the spot
Where passed my days of innocence—to dream
Of the pure streams of infant happiness—
Sunk in life's wild and burning sands—to dwell
On visions faded, till my broken heart
Should cease to throb—to purify my soul
With high and holy musings—and to lift
Its aspiration to the central home
Of love and peace and holiness in Heaven.

OUR GAL.

I must write it; if no nobody ever reads a line of it, I must, while it is all new and fresh in my mind, write out the history of the last two weeks and the description of 'our gal,' as Harry calls her.

Our gal first made her appearance in the house two weeks ago last Monday, and I hailed her broad face and stout figure with most hearty welcome. Little did I realize—but to begin at the beginning. I was, I am a very young housekeeper, yet theoretically I do know something of the arts and sciences thereunto appertaining. I was married about two years ago; but we have always boarded until now, and when I started in my pretty house, with two good girls, and everything new, I fancied that clockwork would be a mere wandering vagrant compared to the regularity of my proceedings.

"'Twas on a Sunday morning," as the song says, that my troubles began. I was dressing for church, when my chamber-maid came up with a rueful countenance.

"If you please, Mrs. Harvey, I'm going."

"Going!" I exclaimed. "Where?"

"To leave, ma'am. Home. I've got a spell of neuralgia coming on, and I'm going home to lay by."

"But you can lie down here if you are sick."

"Well ma'am, I ain't to say sick, exactly, but I'm fixing for a turn."

"A turn?"

"Yes. I have neuralgia in spells, and I always feel 'em coming."

Words were vain. Go she would, and go she did. I went into the kitchen to explain to the cook that she must do double duty for a time. She was a perfect teragant, and to my utter amazement she wheeled round with the cry—

"Gone! Jane gone! Will you get another girl?"

"Certainly."

"To-day?"

"How can I get a girl on Sunday?"

"And to-morrow was day! Well, I'm not going to stay to do all the work. You'll either get another girl early to-morrow or I'll leave!"

"You'll leave now, in the shortest space of time it takes to go from here to the door," cried Harry from the sitting room, where he had overheard us.

With many insolent speeches she departed, and inconvenient as it was, I was glad to see her go.

Of course there was no church, and I began to get dinner. Harry, like a masculine angel as he was, took off his coat and came down to help me, with an assurance that he actually could not sit still and hear the cook use the tone she did one instant longer. It was a merry day. Harry raked the fire till his glossy brown curls were powdered with gray, which premature sign of age was produced, he assured me, by 'care, and not the weight of years.' He peeled potatoes so beautifully that were about as big as bullets, after he had taken off the skin an inch thick all round. Pies were the only article of cookery with which I was particularly acquainted, so I made a meat pie, two apple pies, and short cake for supper, which we ate with the dinner at six o'clock. It was late enough when we cleared up, but at last all was done but one thing. Harry was in the bath-room refreshing himself, when I discovered that the coal was all gone. I hated to call him down, for he had worked hard all day, so I took the scuttle and went down in the cellar myself, laughing to think how he would scold when he knew it. I am a weak woman, and not very strong, but I filled the big scuttle, and tugging away with both hands, started up stairs.

I was at the top, my labor nearly over, when somehow, I cannot tell how, I lost my balance. I reeled over, and the heavy thing came with me, down to the bottom of the stairs. I felt it crushing my foot. I heard Harry's call, and then fainted. I know now, though I did not then, how he lifted me in his strong arms, and carried me up stairs, and the touch of the cold water which he poured over me is the next thing I remember. As soon as I was conscious and able to speak, I let him go for the doctor, lamenting that mother and Lou were both out of town for the Summer.

Well, well; it was aweary night; no time to scold, Harry said, so he petted, nursed and tended me, till my heart ached with its fullness of love and gratitude. Morning found me, my fractured ankle in a box, lying helpless in bed, and Harry promised to send me a girl immediately. So, after this long prelude I come to 'our gal.' Oh! I must tell you how Harry made me a slice of buttered toast for breakfast, by buttering the bread on both sides and then toasting it.

It was about nine o'clock when my new girl came. Harry had given her a dead-latch key, so she entered and came up to my door. Her knock was the first peculiarity that startled me. One rap, loud as a pistol shot, and as abrupt.

"Come in!"

With a sweep the door flew back, and in the space stood my new acquisition. Stop a moment! I must describe her. She was very tall, very robust and very ugly. Her thick hair grew low on her forehead, and her complexion was uniformly red. Her features were very large, and her mouth full of (her only beauty) white, even teeth. Still, the face was far from stupid. The mouth, though large, was flexible and expressive, and the big black eyes promised intelligence. But oh, how can I describe her 'ways,' as Harry calls them? She stood for an instant perfectly motionless, then she swept down in a low, and really not ungraceful courtesy.

"Madam," she said in a deep voice, 'your most obedient.'

"You are——" I said questionably.

"Your humble servant."

This was not 'getting on' a bit; so I said—

'You are the girl Mr. Harvey sent from the Intelligence Office?'

'I am that woman,' she said with a flourish of her shawl; 'and here is my certificate of merit;' and she took a paper from her pocket. Advancing with a long step, a stop, another step and stop, until she reached my bedside, she handed me the paper with a low bow, and then stepping back three steps she stood waiting for me to read it, with hands clasped and drooping, and her head bent as if it were her death warrant.

It was a well written, properly worded note from her former mistress, certifying that she was honest and capable, and I really had no choice but to keep her, so I told her to find her room, lay off her bonnet, and then come to me again. I was half afraid of her. She was not drunk, with those clear black eyes shining so brightly, but her manner actually savored of insanity. However, I was helpless, and then—Harry would come as early as he could, and I could endure to wait.

'Tell me your name,' I said, as she came in with the stride and stop.

'My name is Mary,' she said, in a tone so deep that it seemed to come from the very toes of her gaiters.

'Well, Mary, first put the room in order before the doctor comes.'

Oh, if words could only picture that scene! Fancy this tall, large, ugly woman, armed (I use the word in its full sense) with a duster, charging at the furniture as if she were stabbing her mortal enemy to the heart. She stuck the comb into the brush as if she were saying, 'Die traitor!' and piled up the books as if they were faggots for a funeral flame. She gave the curtains a sweep with her hands as if she were putting back tapestry for a royal procession, and dashed the chairs down in their places like a magnificent bandit spurning a tyrant in his power.

But when she came to the invalid she was gentle, almost caressing in her manner, propping me up comfortably, making the bed at once easy and handsome, and arranging my hair and dress with a perfect perception of my sore condition. And when she dashed out of the room, I forgave the air with which she returned and presented a tray to me for the sake of its contents. Such delicious tea and toast, and such perfection of poached eggs, were an apology for an eccentricity of manner. I was thinking gratefully of my own comfort and watching her hang up my clothes in the closet in her own style, when the dinner bell rang. Like lightning she closed the closet door, caught up the tray, and rushed down stairs. From my open door I could hear the following conversation, which I must say rather astonished even me, already prepared for any eccentricity.

Dr. Holbrook was my visitor, and of course his first question was—

'How is Mrs. Harvey this morning?'

In a voice that was the concentrated essence of about one dozen tragedies, my extraordinary servant replied—

'What man art thou?'

'Is the woman crazy?' cried the doctor.

'Lay not that flattering unction to your soul!' cried Mary.

'H'm.—yes—' said the doctor, musingly; then in his own cheery, brisk tones he added: 'You are the new servant, I suppose?'

'Sir, I will serve my mistress till chill death shall part us from each other.'

'H'm. Well now, in plain English, go tell her I am here.'

'I go, and it is done!' was the reply, and with the slow stride and halt I heard her cross the entry. She was soon at my door. 'Madam, the Doctor waits!' she said, standing with one arm out in a grand attitude.

'Let him come up,' I said, choking with laughter.

She went down again.

'Sir, from my mistress I have lately come, to bid you welcome, and implore you to ascend. She waits within yon chamber for your coming.'

Is it to be wondered at that the Doctor found his patient in perfect convulsions of laughter, or that he joined her in her merriment?

'Where did you find that treasure?' he asked.

'Harry sent her from the office.'

'Stage-struck evidently, though where she picked up the fifth cut actress manner remains to be seen.'

The professional part of his visit over the Doctor stayed for a chat. We were warmly discussing the news of the day, when—whew! the door flew open, and in stalked Mary, and announced with a swing of her arm—

'The butcher, Madam!'

I saw the Doctor's eyes twinkle, but he began to write in his memorandum book with intense gravity.

'Well, Mary,' I said, 'he is not waiting?'

'The dinner waits!' she replied. 'Shall I prepare the viands as my own judgment shall direct, or will your inclination dictate to me?'

'Cook them as you will, but have a good dinner for Mr. Harvey at two o'clock.'

'Between the strokes 'twill wait his appetite.' And with another sweeping courtesy, she left the room, the door, as usual after her exit, standing wide open.

She was as good as her word. Without any orders from me, she took it for granted that Harry would dine up stairs, and set the table in my room. I was beginning to let my keen sense of the ludicrous triumph over pain and weariness, and I watched her, strangling the laugh till she was down stairs. To see her stab the potatoes, and behead the celery, was a perfect treat, and the air of a martyr preparing poison, with which she poured out the water, was perfect. Harry was evidently prepared for fun, for he watched her as keenly as I did.

Not one mouthful would she bring to me, till she had made it as dainty as could be; mashing my potatoes with the movement of a saint crushing vipers, and buttering my bread in a manner that fairly transformed the knife into a dagger. Yet the moment she brought it to me all the affectation dropped, and no mother could have been more naturally tender. Evidently, with all her nonsense, she was kind-hearted.

It took but one day to find that we secured a perfect treasure. Her cooking was exquisite enough for the palate of an epicure; she was neat to a nicety, and I soon found her punctual, and trustworthy. Her attentions to myself were touching in their watchful kindness. Sometimes, when the pain was very severe, and I could only lie suffering and helpless, her large hands would smooth my hair softly, and her voice became almost musical in its low murmurings of 'Poor child! Poor little child!' I think her large, strong frame, and consciousness of physical superiority to me in my tiny form and helpless state, roused all the motherly tenderness in her nature, and she lavished it upon me freely.

I often questioned her about her former places, and discovered to my utter amazement that she never was in a theatre, never saw or read a play, and was entirely innocent of novel reading.

I had become so used to her manner, and no longer feared she was insane, when one evening my gravity gave way utterly, and for the first time I laughed in her face. She had been arranging my bed and self for the night, and was just leaving the room, holding in one hand an empty pitcher, and in the other my wrapper. Suddenly a drunken man in the street called out, with a yell that really was startling, though by no means mysterious. Like a flash, Mary struck an attitude.—One foot advanced, her body thrown slightly forward, the pitcher held out, and the wrapper waved aloft she cried out, in a voice of perfect terror—

'Gracious heavings! What hideous screams is those?'

Gravity was gone. I fairly screamed with laughter, and her motionless attitude and wondering face only increased the fun.

'Go down, Mary, or you will kill me!' I gasped at last.

To see her brandish a dust-brush would strike terror to the heart of the most daring spider; and no words of mine can describe the frantic energy with which she punches pillows, or the grim satisfaction on her face at the expiring agonies of a spot of dirt she rubs out of existence. The funniest part of all is her perfectly unconsciousness of doing anything out of the way.

Harry found out the explanation. She had lived for ten years with a retired actress and actor, who wished to bury the knowledge of their past life, and who never mentioned the stage. Retaining in private life the attitudes and tones of their old profession, they had made it a kind of sport to burlesque the passions they so often imitated, and poor Mary had unconsciously fallen into the habit of copying their peculiarities. When they left for Europe, she found her way into the Intelligence Office, where Harry secured her. Long, long may she remain 'Our Gal.'

THE VOTE FOR GOVERNOR.

We give below the result for Governor of Maryland in the entire State, at the State election on 5th November last. The total vote of the State for the new constitution was 68,842, and now for Governor it is 85,492, showing an increase of 16,650. The majority for the new constitution was 24,124, while the democratic conservative majority now for Governor is 41,712.

In 1860 the whole vote of the State for President was 92,142, and in 1864 it was 72,892. The vote cast for Governor at the late election is only 6,650 short of the heavy vote in 1860. More than this number of registered voters in Baltimore city alone neglected to exercise the right of suffrage at the late election. The following returns are nearly all official:

COUNTIES.	FOR GOVERNOR.		CONSTITUTION.	
	BOWIE, (DEM. C.)	BOND, (RAD.)	1867.	FOR AGAINST.
Allegany.....	2,884	2,175	2,059	1,779
Anne Arundel.....	1,695	1,150	1,282	199
Baltimore city.....	19,912	4,846	16,120	5,627
Baltimore county.....	4,131	1,324	3,285	1,532
Calvert.....	881	9	348	168
Carroll.....	2,815	2,291	2,187	1,920
Cecil.....	2,513	1,588	1,773	1,214
Charles.....	1,296	7	791	17
Caroline.....	1,004	231	766	262
Dorchester.....	1,572	341	1,324	362
Frederick.....	4,185	3,705	3,397	3,028
Harford.....	2,297	806	1,879	749
Howard.....	1,210	335	728	338
Kent.....	1,420	136	1,010	146
Montgomery.....	1,674	310	288	45
Prince George's.....	2,055	78	995	149
Queen Anne's.....	1,757	95	1,214	176
Somerset.....	1,315	137	1,257	1,037
St. Mary's.....	1,516	39	746	119
Talbot.....	1,273	138	1,080	255
Washington.....	3,236	2,760	2,658	2,527
Worcester.....	1,401	135	1,226	690
Wicomico.....	1,570	263	....	....
Total.....	63,602	21,890	46,483	22,359

Bowie's maj. 41,712 Maj. for 24,124

The entire Democratic Conservative ticket was elected—Executive, Legislative and Judiciary—not a single Republican being elected to any office throughout the state.

"Kit hates moustaches: 'so much hair
Makes every man look like a bear.'
But Fanny, who no thought can fetter;
Blurs out 'the more like bears the better;
Because'—her pretty shoulders shrugging—
'Beards are such glorious chaps for hugging.'"

DOMESTIC RECIPES.

BONED TURKEY.—This noble bird, the pride of American tables, cannot easily be recognized after undergoing the culinary process termed "boning," but for a cold relish nothing more acceptable need be sought. It is a favorite dish at evening parties. It may be thus prepared: Boil a turkey in as little water as may be, until the bones can be easily separated from the meat. Remove all the skin; cut the meat in thin slices, mixing together the light and dark parts. Season with salt and pepper. Take the liquid in which the turkey was boiled, having kept it warm, pour it on the meat, and mix it well. Shape it like a loaf of bread, wrap it in cloth and press with a heavy weight for a few hours. When served up it is cut in thin slices.

Some of our professional cooks can shape it somewhat like the original bird, so that one can not tell at once when it is seen that it is boned turkey; but this requires skill and labor. —*Bettie in Germantown Telegraph.*

PREMIUM RECIPES.—*Mrs Betsy Lenoir's Method of Curing Bacon Sides.*—Salt well with good salt, with three spoons full of pounded red pepper, to a half bushel of salt. After lying in salt five or six weeks, hang up and smoke well with green hickory wood. Keep them hanging in a tall close smoke house till used.

Mrs. Betsy Lenoir's Method of Curing Bacon Hams.—Salt well with good salt, containing three spoons full of pounded red pepper, to half a bushel of salt; put about three spoons full of molasses or sugar on the flesh part of the ham. After lying in salt 5 or 6 weeks, hang and smoke well with green hickory wood. When well smoked and dried, put each ham in a sack; whitewash the sack with lime and water; and hang them again till wanted. —*Communicated from Transactions Southern Central Ag'l Society to Southern Cultivator.*

A RICH CHRISTMAS PUDDING.—One pound of raisins stoned, one pound of currants, half a pound of beef suet, quarter of a pound of sugar, two spoonfuls flour, three eggs, a cup of sweetmeats, and a wine-glass of brandy. Mix well and boil in a mould eight hours.

A GOOD CHRISTMAS PUDDING.—One pound of flour, two pounds of suet, one pound of currants, one pound of plums, eight eggs, two ounces of candied peel, almonds and mixed spice according to taste. Boil gently for seven hours.

MINCE PIES.—Take a pound of beef, free from skin and strings, and chop it very fine; then two pounds of suet, which likewise pick and chop; then add three pounds of currants nicely cleaned and perfectly dry, one pound and a half of apples, the peel and juice of a lemon, half a pint of sweet wine, half a nutmeg and a few cloves and mace, with pimento in fine powder; have citron, orange and lemon peel ready, and put some in each of the pies when made.

MINCE MEAT.—Six pounds of currants, three pounds of raisins stoned, three pounds of apples chopped fine, four pounds of suet, two pounds of sugar, two pounds of beef, the peel and juice of two lemons, a pint of sweet wine, a quarter of a pint of brandy, half an ounce mixed spice. Press the whole into a deep pan when well mixed.

OLD ENGLISH PLUM PUDDING.—To make what is termed a pound pudding, take of raisins well stoned, currants thoroughly washed, one pound each; chop a pound of suet very fine and mix with them; add a quarter of a pound of flour or bread finely crumbled, three ounces of sugar, one ounce and a half of grated lemon peels, a blade of mace, half a small nutmeg, half a dozen eggs well beaten; work it well together, put into a cloth, tie it firmly—allowing room to swell—and boil not less than five hours. It should not be suffered to stop boiling.

BALTIMORE MARKETS---Nov. 26.

Prepared for the "MARYLAND FARMER" by JOHN MERYMAN & Co., BALTIMORE.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Pot \$8.75@9; Pearl \$11@11.25.
BEESWAX.—38@40 cts. per lb.
COFFEE.—Rio 16@17 1/2 cts. gold; Java 24 1/2@25 cts. gold;
Laguayra 17 1/2@18 cts. gold.

COTTON—

	Upland.		Gulf.
Ordinary.....	15 @— cts.	—@— cts.	
Good Ordinary..	16 @— cts.	—@— cts.	
Low Middling..	17 @— cts.	—@— cts.	
Middling.....	17 1/2 @— cts.	—@— cts.	

FEATHERS.—Common 40@50 cents; medium 55@65; good 70@75; prime live Geese 80@85.

FI+H.—Mackerel—No. 1 \$18@20; No. 2 \$12@14; No. 3 \$10.50@11; Labrador Herring \$9@9.50; Codfish \$3@3.5; Hake \$3@3.50.

FRUIT.—Apples 6 1/2@7 1/2 cts.; peaches, 7 1/2@9 cts.

FLOUR—

Howard Street Super and Cut Extra.....	\$9.50 @	\$10.25
“ “ Shipping Extra.....	10.50 @	11.00
“ “ Retailing.....	11.50 @	12.00
“ “ Family.....	12.50 @	13.00
Ohio Super and Cut Extra.....	9.25 @	10.00
“ Shipping Extra.....	10.50 @	10.75
“ Retailing Brands.....	00.00 @	00.00
“ Choice Extra.....	11.00 @	11.50
“ Family.....	12.00 @	12.50
Northwestern Super.....	8.25 @	8.75
do Extra.....	10.00 @	11.00
City Mills Super.....	9.50 @	10.00
“ Standard Extra.....	10.50 @	10.75
“ Shipping Extra.....	12.00 @	12.50
Baltimore and Weyerton Family.....	14.00 @	00.00
Baltimore, Welch's & Greenfield Family.....	14.50 @	15.00
“ High grade Extra.....	13.00 @	13.50
Middlings.....	0.00 @	0.00
Fine.....	0.00 @	0.00
Rye Flour.....	7.50 @	0.00
Corn Meal—City Mills.....	6.25 @	0.00
Buckwheat, No. 1, 1/2 100 lb.....	4.25 @	5.00

FERTILIZERS—

No. 1 Peruvian Guano.....	\$ 82	1/2 ton of 2000 lbs.
Soluble Pacific Guano.....	65	1/2 ton “
Rodunda Guano.....	30	1/2 ton “
Flour of Guano.....	65	1/2 ton “
Turner's Excelsior.....	70	1/2 ton “
Turner's Ammo. S. Phos.....	55	1/2 ton “
Coe's Ammo. S. Phos.....	60	1/2 ton “
Lister Bros. Fresh Bone Sup. Phos	55	1/2 ton “
“ Pure Bone.....	45	1/2 ton “
Andrew Coe's Super-phosphate..	60	1/2 ton “
Baugh's Raw Bone S. Phos.....	56	1/2 ton “
Zell's Raw Bone Phosphate.....	56	1/2 ton “
do. Super Phosphate of Lime.....	60	1/2 ton “
Rhodes' S. Phos.....	57 1/2	1/2 ton “ bags.
Rhodes' do.....	55	1/2 ton “ bbls.
Mapes' do.....	60	1/2 ton “
Bone Dust.....	45	1/2 ton “
Hornor's Bone Dust.....	42.50	1/2 ton “
Dissolved Bones.....	60	1/2 ton “
Baynes' Fertilizer.....	40	1/2 ton “
“ Fine Ground Bone.....	45	1/2 ton “
“ Poudrette.....	20	1/2 ton “
Plaster.....	18	1/2 ton 2240 lbs.
“ A A ” Mexican Guano.....	33	1/2 ton of 2000 lbs.
“ A ” do.....	30	1/2 ton “
Moro Phillips' Super-Phosphate..	56	1/2 ton “
Berger & Burtz's S. Phos. of Lime	55	1/2 ton “
Plaster.....	\$2.25	1/2 bbl.
Sulphuric acid, 4 1/2 c. 1/2 lb.—(Carboy \$3.)		

GRAIN.—Wheat—Choice white \$2.70@2.75; choice red \$2.55@2.60; good do. \$2.42@2.48; inferior \$2.15@2.18.—Corn—Prime white \$1.30@1.35; prime yellow \$1.25@1.35
Oats—Good to prime 72@74 cts; low grade 68@71 cts. Rye—\$1.55.

HAY AND STRAW.—Good to prime Baled Timothy \$20@22; Rye Straw \$18@20.

MILL FEED.—Middlings, medium, 40@45 cents; heavy 60 cts; Brown Stuff 21@22 cents.

MOLASSES.—Porto Rico, 55@70 cts; Cuba clayed 42@45 cts; Muscovado 40@55 cts; English Island 55@70 cts.

PROVISIONS.—Bacon Shoulders 12@12 1/2 cts; rib sides 15@15 1/2 cts; clear rib 15 1/2@16 cts.; hams 18@19 cts. Mess Pork \$22.50. Lard 13 cts.

SALT.—Ground Alum \$2.20@2.25; Fine \$2.90@3.10; Turks Island 55@56 cts. per bushel.

SEED.—Clover \$7.50@8; Timothy \$2.50@2.75; Flax \$2.40@2.50.

SUGAR.—Porto Rico 12 1/2@13 cts.; Cuba 12 1/2@12 1/2 cts.

TOBACCO—

Maryland—Frosted to common.....	\$ 2.75 @	\$ 3.50
“ sound common.....	4.00 @	4.50
“ good do.....	5.50 @	6.50
“ middling.....	7.50 @	9.50
“ good to fine brown.....	10.00 @	15.00
“ fancy.....	17.00 @	25.00
“ upper country.....	3.00 @	30.00
“ ground leaves, new.....	3.50 @	23.00
Ohio—Inferior to good common.....	3.00 @	6.00
“ brown and greenish.....	6.00 @	7.00
“ good and fine red and spangled.....	00.00 @	00.00
“ medium and fine red.....	7.50 @	15.00
“ common to medium spangled.....	8.00 @	15.00
“ fine spangled.....	15.00 @	20.00
“ fine yellow and fancy.....	20.00 @	30.00

WOOL.—Unwashed, 22@23 cts.; Burry unwashed 14@16 cts.; tub washed 30@33 cts.; fleece, 30@35 cts.; No. 1 pulled 22@28 cts.

BALTIMORE CATTLE MARKET, Nov. 26.—Old Cows and Scalawags \$2.50@3.75; ordinary thin Steers, Oxen and Cows \$3.75@4.75; fair to good cattle \$4@5.50; fair Beeves \$5.50@6.50; best Beeves \$6.50@7.87 1/2.

BOOK NOTICES.

BLACKWOOD'S EDINBURGH MAGAZINE FOR OCTOBER.--

This excellent monthly comes to us with its usual variety. "Brownlows" is continued and deepens in interest, and a new serial story, "Linda Tressel" is commenced. The other articles are "Inroads upon English," "At the Alps Again," "Monetary Reform," "A City of the Plague," "Work and Murder," and "Postscript," "The American Debt" and "The Financial Prospects of the Union."

WESTMINSTER REVIEW FOR OCTOBER.—"Polygamy and Monogamy in Turkey," "The Apostles' Creed," "Louis Blanc's Letters on England," "Lloyd's Sweden and its Game Birds," "Dualism in Austria," "La Bruyere," "Democracy," "Prussia," "Contemporary Literature."—Issued by Leonard Scott Publishing Company, 140 Fulton street, New York. Blackwood, or any of the Reviews, \$4 per annum.

LONDON QUARTERLY REVIEW FOR OCTOBER.—Contents: "Royal Authorship," "The French Retreat from Moscow," "Trades Unions," "Sir Henry Bulwer's Historical Characters," "The Talmud," "Science in Schools," "Portraits of Christ," "The Abyssinian Expedition," "The Conservative Surrender." Published by the Leonard Scott Publishing Co., 140 Fulton street, New York.

RECEIVED.

From W. Richardson & Co., Galveston, Texas, "The Texas Almanac for 1867, with Statistics, Descriptive and Biographical Sketches, &c., relating to Texas." To those seeking information as to Texas this Almanac will prove valuable.

From Fred'k Gerhard, Dey street, New York, the "American Illustrated Family Almanac" for 1868. An entertaining and useful book. Price 30 cents. Also, "The American Farmer's Almanac for 1868," containing many articles of interest to the agriculturist. Price 30 cents.

From M. O'Keefe & Son, Rochester, New York, their catalogue of Fruit Plants and Vegetable Seeds.

From Scribner, Welford & Co., foreign booksellers and importers, 654 Broadway, New York, list of English works and new editions.

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